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ABSTRACT

A digest about how higher education can use new telecommunications technologies, especially to reach students in off-campus settings, is presented. Six issues of volume 1 of the newsletter "TELESCAN" include articles on special topics and descriptions of national initiatives involving applications of technology-based instruction in higher education, including those of the Corporation for Public Broadcasting, National Public Radio, and the Public Broadcasting Service. Also included are abstracts and annotated bibliographies based on periodical articles. Broad categories that are addressed by the article abstracts include: innovative concepts, research, broadcast television, cable television, teletext/videotext, computers, radio, satellites, teleconferencing, copy delivery systems, interactive video, and multi-media systems. Brief reviews of a variety of books, research reports, and occasional papers are also provided, along with ordering information. Finally, information is provided on conferences, workshops, seminars, projects, and other events involving the use of telecommunications for higher education. Specific contents include: legislative reports on higher education and telecommunications issues, and a list of telecommunications projects funded by the Fund for the Improvement of Postsecondary Education. An index to volume 1 is included. (SW)

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TELESCAN

The Digest of the Center for Learning and Telecommunications

VOLUME 1 - Issues 1-6, September/October 1981-July/August 1982.

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TELESCAN

SEPTEMBER/
OCTOBER 1981

The Digest of the Center for Learning and Telecommunications VOLUME I

TELESCAN: Your Monitoring Service

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This is your complimentary issue of *TELESCAN*, the digest of the Center for Learning and Telecommunications. *TELESCAN* is the result of our efforts to pull together vast amounts of information about the potential of telecommunications in higher education. How do we keep on top of this burgeoning field?

- by tracking the most up-to-date information from a wide variety of sources and giving it to you in a manageable, concise form;
- by monitoring more than 75 periodicals, plus books, research reports, projects and conferences;
- by using a network of advisors and contributors who represent a cross-section of expertise and interests.

Subscribe to *TELESCAN* and tap into this talent bank of experts who provide reports of the latest developments in telecommunications for higher education.

The Center for Learning and Telecommunications was established at the American Association for Higher Education under a grant from the Carnegie Corporation of New York. Bi-monthly issues of *TELESCAN* serve as a central source of information on ways higher education can use new telecommunications technologies to reach students in off-campus settings.

You can be among the diverse audience of forward-thinking administrators, managers, educators, technicians, students, and others interested in the potential of technology-based instruction who will be served by *TELESCAN*. You can also become part of the Center's rapidly expanding network by contributing interesting materials that come to your attention.

By subscribing to *TELESCAN*, you'll also have a hotline to national initiatives that apply telecommunications to higher education. Contributing to *TELESCAN* are representatives from the Corporation for Public Broadcasting, the Public Broadcasting Service, the Appalachian Community Service Network, the National Telecommunications and Information Administration, National Public Radio, the Joint Council on Educational Telecommunications, the Public Service Satellite Consortium, as well as others from colleges and universities, higher education associations, public broadcasting stations, and federal and state agencies. Nowhere else can you find such a broad base of expertise.

TELESCAN keeps you updated on all the technologies – broadcast and cable television and radio, ITFS, teletext, videotext, telephone and satellite teleconferencing, direct broadcast satellites, dial access, computers, audio and videotapes, and videodiscs. Where else can you learn about the latest educational applications of all these technologies?

Subscribe now to receive five more issues in the 1981-82 volume of *TELESCAN*. The subscription price is $35. (Members of the American Association for Higher Education are eligible for a special discount. You pay only $30.) This premier issue of *TELESCAN* covers periodicals from May through July 15, 1981. Subscribe by November 15 to receive a special supplement reviewing periodicals from January through April 1981.

The Center for Learning and Telecommunications and *TELESCAN* are the result of the cooperative efforts of many individuals in the academic and telecommunications communities who are eager to provide this important service to their colleagues. Won't you join us by sending your subscription in the enclosed envelope?

Thank you.

Marilyn Kressel

Marilyn Kressel
Director, Center for Learning and Telecommunications

P.S. Don't forget – subscribe by November 15 and receive your special supplement reviewing periodicals from January through April 1981.

CAPITOLSCAN

Items reported in Capitolscan are devoted to national initiatives involving applications of technology-based instruction in higher education.

CBP/Annenberg Project Progresses

In February 1981, the Corporation for Public Broadcasting (CPB) and the Annenberg School of Communications (ASC) signed an agreement under which ASC will give CPB $10 million per year for the next 15 years to operate the CPB/Annenberg Project.

The goals of the project are: 1) to create one or more significant collections of new, innovative, high quality college level materials and 2) to demonstrate the use of communications systems for addressing higher education problems. The primary audience for these materials is those persons who demonstrate an interest in college level education, but because of lack of time, financial or instructional resources, or other reasons are unable to pursue it.

More specifically, the project will provide higher education institutions with a new resource of educational programming, and will explore and discover new ways to advance higher education through telecommunications in those areas where the need is demonstrable and where "venture capital" is required.

Robben W. Fleming, CPB president, is serving as interim director of the project and Douglas F. Bodwell has been appointed deputy director. In administering the project, the director is assisted by a council of eight individuals, two each appointed by CPB, ASC, PBS, and NPR. The council can choose to appoint two additional members from the public at large. The current members of the council are:

Lillie E. Herndon, *chairman of the CPB Board;* Diana Lady Dougan, *chairman of the CPB Board Education Committee;* George Gerbner, *dean of the Annenberg School of Communications at the University of Pennsylvania;* Merrill Panitt, *editorial director of TV Guide and a member of the board of The Annenberg School of Communications;* Newton N. Minow, *former chairman of the PBS Board;* John W. Ryan, *chairman of the PBS/PTV-3 Committee and president of Indiana University;* Maurice Mitchell, *chairman of the NPR Board;* Al Hulsen, *chairman of the NPR Finance and Development Committee and general manager of KQED-FM.*

A meeting of the council is scheduled for September 18, 1981. At that time a complete operational plan, which will have been prepared by staff after consultation with educators and broadcasters throughout the country, will be presented. If the plan is acceptable to the council, an announcement for proposals will be made immediately and guidelines will be provided to interested parties. Assuming this schedule, the first grant selections may be made at the council's January 1982 meeting.

Further progress reports on the CPB/Annenberg Project will be provided to *TELESCAN* readers in future issues.

NPR Sponsors Audio Workshops

Under a grant from the Fund for the Improvement of Postsecondary Education, National Public Radio (NPR), has established a station/college consortium in three different geographic areas based on a local model established at West Virginia Wesleyan College. Those areas are: WBGO and Fairleigh Dickinson University in Newark New Jersey; WHRO and Old Dominion University in Norfolk, Virginia; and KPBS and San Diego State University in San Diego, California. During year one of the project, workshops were held at each site to prepare faculty and station personnel for the production and utilization of audio instruction material. During year two, each site produced one full-credit audio course.

As an outgrowth of the FIPSE grant, NPR has facilitated three seminars aimed at reaching the adult student through radio/audio. The first was a Public Telecommunications Institute held in November 1980. The second seminar, held in May 1981, included deans of continuing education from many four-year institutions such as Harvard, UCLA, Michigan State, University of Wisconsin, University of South Carolina, University of Texas, and many others. This seminar was able to bring NPR station managers together with institutional administrators to begin forming partnerships. The third seminar, held at the University of Massachusetts-Harbor Campus in June 1981, evoked many reponses from cable companies interested in the potential of educational programming for cable audio.

Based on enthusiastic responses to the three seminars, NPR plans to hold four to five more during the coming year. One is scheduled at the Western Educational Society of Telecommunications Conference in Reno, Nevada in November 1981. For more information about this seminar, contact Skip Prior, National Association of Educational Broadcasters, 1346 Connecticut Avenue, N.W., Washington, D.C. 20036, 202/785-1100.

Another seminar is being planned around the Public Radio Conference in Washigton, D.C. in April 1982, and depending on the availability of funding, several regional seminars may be held in the Midwest and the South. For general information about the seminars, contact Karen Kearns, National Public Radio, 2025 M Street, N.W., Washington, D.C. 20036, 202/822-2000.

PBS Launches New Adult Learning Program Service

Two hundred fifteen public television stations will broadcast college credit telecourses this fall as part of the new Adult Learning Service being coordinated nationally by the Public Broadcasting Service (PBS)/PTV-3. The stations are working in partnership with an estimated 500 colleges and universities across the nation to offer PBS-distributed television courses to adult learners in their local markets.

The adult learning schedule for Fall 1981, consists of seven courses specially developed for college credit and two "wrap-around" series. PBS stations, local colleges and universities select the courses to be televised and determine the broadcast schedules. On the average, two to three courses are being offered in each community. Students enroll for academic credit through participating local higher education institutions. Schools pay a modest licensing fee and small student enrollment fees to use the courses for credit. In addition, they receive administrative and faculty print materials as well as the right to record programs off-the-air, or to acquire them in advance for use in learning centers.

Under a grant from the Corporation for Public Broadcasting, PBS/PTV-3 has been able to provide stations and cooperating colleges with a variety of specially created promotional materials to inform the public about these telecourse offerings. The CPB grant also provides matching funds to assist stations and institutions in mounting their local promotional efforts.

Preliminary data on participating institutions indicate that four-year colleges and universities are likely to represent nearly half of the total number. Community colleges are embracing the new service to enhance their already substantial effort. The analyses now underway will provide information on types and sizes of institutions participating in the PBS service, their governance, number and type of telecourses being offered.

PBS/PTV-3 also plans to collect more detailed information on the use of its service through surveys of faculty and administrators, students, and public television station staff. Results of the PBS/PTV-3 analyses and surveys will be reported in future issues of *TELESCAN*.

Further information on the new Adult Learning Program Service may be obtained from local public television stations or from PBS/PTV-3 at 202/488-5360.

PBS/Cable Grand Alliance Gets Go Ahead

At their annual meeting in Cincinnati, Ohio on June 30, public television stations across the country voted to proceed with a "grand alliance" between PTV stations and the nation's arts and educational institutions. The new pay cable program service will be called "PBS/Cable."

The "Grand Alliance" plan calls for a new pay TV service which will include a major performing arts, cultural or nonfiction feature presentation each night, along with a broad range of adult learning programming during the day. The plan is based on a partnership between public television stations and the nation's cultural and educational institutions.

The evening program service would be supported by a subscriber fee and revenues earned from corporate underwriters. The daytime service would include college credit courses arranged through subscribing institutions as well as personal enrichment and professional training programs. Institutional participants would pay annual license fees for the right to record these programs for their own use.

PBS/Cable would be distributed nationally over the public television satellite system and made available locally by public TV stations, primarily through cable television, to local subscribers.

Highlights from the research findings and operational details include:

Market Projections

Three million TV households are likely to subscribe to the service; 585,000 households are indicated as "definite" subscribers. Initial estimates suggest PBS/Cable would be economically viable with as few as 400,000 subscribers.

Program Delivery

Cable television, as opposed to other technologies, is indicated as the best method to deliver the new pay program service to individual households. A number of origination points would provide opportunities for local and regional programming.

Financial Analysis

Total capital required during start-up and the first two years of operation is approximately $56.3 million. The venture breaks even in the second year of operation. By the eighth year of operation, the venture could generate in excess of $55 million.

Under the presumed financial structure, PTV stations and arts organization partners could expect to receive $100 million in year 8 for program production and other services and as return on their investment in the Grand Alliance.

Programming

PBS/Cable will offer up to a three-hour program package each night featuring a drama, film or documentary. The first year budget calls for a total of 104 evening events with production costs ranging from $25,000 to $1 million. Each program package would be replayed two or three times in a year.

The daytime service assumes a break-even status. It would include master classes, telecourses for college credit, video archiving of major lectures, scholarly or scientific conferences, presentations of major papers and research findings, and highly specialized courses otherwise not readily available on campuses presented by experts and scholars. Development of the Grand Alliance will continue over the next year as public television stations and arts groups decide how to implement the PBS/Cable project.

TELESCAN

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National Federation of Local Cable Programmers LPTV Hotline

In January 1981, the National Federation of Local Cable Programmers received funds from the John and Mary Markle and Rockefeller Foundations to aid nonprofit organizations in developing Federal Communications Commission (FCC) applications for low power television stations. Low power stations are the first new broadcast service proposed by the FCC in 20 years. If FCC rules are implemented low power stations will trade reduced broadcast coverage area (5-20 miles) for greatly reduced start-up costs.

The programming possibilities of low power stations are only limited by imagination or resources. Affiliations with cable access centers, school systems, the Public Broadcasting Service, and national low power networks are being developed.

The LPTV Hotline was designed to provide the Washington-based legal, financial, and technical aid that nonprofit organizations need to submit competent applications. The hotline helps explain FCC rules and regulations; provides current interpretations of LPTV processing; facilitates referrals to regional engineering and legal aid, as well as other regional resources; and assists with tower site selection, frequency searches, and waiver and exhibit preparation. The staff also assists those who have already submitted applications by reviewing the filed applications, suggesting additional amendments to strengthen them, and helping to monitor applications through FCC processing.

To date, the hotline has assisted 300 groups from across the country as they explored the possibilities of a low power station in their communities. For more information on the LPTV Hotline, contact the National Federation of Local Cable Programmers, 1314 14th Street, N.W., Washington, D.C. 20005, 202/797-3660.

UPDATE ON . . .

Instructional Telecommunications Consortium, American Association of Community And Junior Colleges (AACJC)

The ITC is an expanded and restructured version of the AACJC's Task Force on Uses of Mass Media for Learning, established originally in 1977. A group of two-year college administrators and instructional television specialists reviewed the Task Force and agreed with the association members that the Task Force's membership appeared to be overly representative of telecourse producers and distributors and not responsive enough to the needs of colleges only interested in using telecourse materials. The group recommended that membership be broadened to include institutions interested in using, rather than producing and distributing, TV and radio courses.

The overall mission of the ITC is to serve as a forum for users and producers to plan curricula, assess available programming, improve utilization, and exert influence on those who make instructional telecommunications policies.

A membership drive is now underway, with membership currently standing at 18. Since most members are either multi-campus institutions or consortia of two-year colleges, the ITC, in effect, now represents about 150 separate colleges. Annual dues are based on full-time enrollments and range from $500 to $1,250, with consortia paying a special rate of $1,500. For information, contact James Zigerell, ITC Staff Director, AACJC, Suite 410, One Dupont Circle, N.W., Washington, D.C. 20036, 202/293-7050.

Task Force on Educational Communications, National Association of State Universities and Land-Grant Colleges (NASULGC)

The newly established Task Force on Educational Communications is an outgrowth of NASULGC's Educational Television Committee. The purpose of the Task Force is to facilitate the exchange of information among its members and encourage closer ties between the university-licensed broadcast stations and continuing education programs. The Task Force also seeks to involve other divisions and departments of institutions in cooperating to develop new instructional materials, share information and funding, and develop better marketing activities. The Task Force hopes to achieve these objectives by working with other organizations already active in this area.

This Task Force brings together representative administrators, station managers, and course designers to discuss mutual concerns. For more information contact Susan Fratkin, Director Special Programs, NASULGC, One Dupont Circle, Washington, D.C. 20036, 202/293-7120.

Division of Educational Telecommunications, National University Continuing Education Association (NUCEA)

This division is one of five within the Council on Continuing Education Delivery Systems of NUCEA. Its purpose is to study prevailing trends in the use of educational telecommunications as well as operational practices and procedures and to make this information available to practitioners.

The division sponsored an NUCEA position paper in support of retaining the Instructional Television Fixed Service (ITFS) microwave channels for the exclusive use of educational institutions as originally prescribed by the FCC in 1934. Photocopies of the paper are available. Send a self-addressed, stamped envelope to Robert V. Dean, Director, Center for Media-Based Instruction, Georgia Institute of Technology, Atlanta, GA 30331.

For further information about the NUCEA Division, contact David K. Bowden, Dean, Telecommunications Instruction and Correspondence Study, 915 Gregg Street, University of South Carolina, Columbia, SC 29208, 803/777-7210.

Below is a list of the 77 periodicals that are reviewed regularly by TELESCAN. A comprehensive list of all the publications appearing in the literature review, with publishers' names and addresses, is available to subscribers upon request from the Center.

Access
National Citizens Committee for Broadcasting
Adult and Continuing Education Today
Today Publications & News Service, Inc.
Advertising Age
Crain Communications
AFI Education Newsletter
American Film Institute
American Libraries
American Library Association
Better Broadcasts News
The American Council for Better Broadcasts
Broadcasting
Broadcasting Publications, Inc.
Business Week
McGraw-Hill, Inc.
Cable Communications
Pryde Publications
Cablevision
Titsch Publishing Co.
CAEL News
Council on the Advancement of Experiential Learning
Change Magazine
Heldref Publications
Channels of Communication
Media Commentary Council, Inc.
Chronicle of Higher Education
Chronicle of Higher Education, Inc.
Communication Research
Sage Publications, Inc.
Communications Abstracts
Sage Publications, Inc.
Communications News
Harcourt Brace Jovanovich, Inc.
Community and Junior College Journal
American Association of Community and Junior Colleges
Community College Frontiers
North Carolina State University Department of Adult & Community College Education
Community Television Review
University Community Video
CPB Reports
Corporation for Public Broadcasting
Educational and Industrial Television
C. S. Tepfer Publishing, Inc.
Educational Technology
Educational Technology Publication
Educational Communications and Technology Journal
Association for Educational Communications & Technology
ETV Newsletter
C. S. Tepfer Publishing, Inc.
Forbes
Forbes, Inc.
Fortune
Time, Inc.
Harper's
Harper's Magazine Foundation
Harvard Business Review
Harvard University
Harvard Educational Review
Harvard University
Higher Education and National Affairs
American Council on Education
IEEE Spectrum
Institute of Electrical & Electronics Engineers, Inc.
Instructional Innovator
Association for Educational Communications and Technology
Intermedia
International Institute of Communication
International Journal of Instructional Media
Baywood Publishing Co., Inc.
International Videotext Teletext News
Arlen Communications, Inc.

Committee on Communications Technology, American Association of State Colleges and Universities (AASCU)

This committee has evolved from a temporary task force into a standing committee devoted to the development of instructional uses for various communications technologies. The committee's activities have been concentrated on a proposal to offer summer workshops for university faculty who are interested in using telecommunications for instruction.

AASCU's annual meeting in November will feature a demonstration of advances in computer technology, specifically in the areas of electric component design and computer graphics. The presentation will focus on both technical design and public service applications of the technology.

The Committee has recently established a liaison with UNESCO's International Program for the Development of Communications (IPDC) to assist in technology exchange between developed countries and developing Third World countries. Planned activities include meetings on international communications issues, and the development of a central database of university communications programs.

For information, contact Cathryn Ryan, AASCU Committee on Communications Technology, One Dupont Circle, Suite 700, Washington, D.C. 20036.

PRINTSCAN

These abstracts and annotated bibliographies are based on articles appearing in periodicals from May 1, 1981 through July 15, 1981.

Innovative Concepts

Forgetting the Question: The Problem of Educational Reform, by Diane Ravitch. *The American Scholar,* Summer 1981.

The questions that have been forgotten, says the author, are: What does it mean to be an educated person? What knowledge is of most worth? Are the graduates of our schools educated people? The questions are not being asked because the schools have lapsed into a sociological perspective of why they are in business. It is easier to raise the level of educational attainment than it is to raise the quality of education.

The article proceeds with a defense of liberal education. What schools should be about is the developing of the powers of intelligence: thinking, reflecting, observing, imagining, appreciating, questioning, and judging. To do this, students need the skills to read, write, compute, speak, and listen. According to the author, sociological goals should be secondary.

Schools and colleges should do what they define that they should do. The author sees an anti-intellectual trend that developed during the Vietnam War and is still with us. Educators allowed themselves to be taken over by the psychological perspective because the sociological apparatus is quantifiable, explainable, and often politically useful. The educators, the article claims, are not yet asking the proper questions about the role of schools and colleges today.

Penland, Patrick R. **"Media and Adult Education."** *International Journal of Instructional Media,* Vol. 8(3) (1980-81), 195-205.

A discussion of an interdisciplinary graduate program at the University of Pittsburgh combining the study of media in adult education with the professional adult education program.

Sinofsky, Esther R. and Frederick G. Knirk. **"Industry, Academia, and Instructional Technology."** *Educational Technology,* May 1981, pp. 36-39.

A discussion of the potential of instructional technologists as resources for business and industry training programs.

Vander Haeghen, Peter. **"Independent Study Courses Can be Very Cost Effective."** *T.H.E. Journal,* May 1981, p. 52+.

Journal of Broadcasting
Broadcast Education Association

Journal of Communication
International Communication Association

Journal of Computer-Based Instruction
Association for Development of Computer-Based Instructional Systems

Journal of Educational Technology Systems
Baywood Publishing Co., Inc.

Journal of the American Society for Information Science
American Society for Information Science

Mass Media Booknotes
Temple University
Department of Radio-TV-Film

NAEB Current
National Association of Educational Broadcasters

Nation's Business
Chamber of Commerce of the U.S.

Newsweek
Newsweek, Inc.

NFCB Newsletter
National Federation of Community Broadcasters

Phi Delta Kappan
Phi Delta Kappan

Popular Science
Times-Mirror Magazines, Inc.

PSSC Newsletter
Public Service Satellite Consortium

Public Broadcasting Report
Television Digest, Inc.

Radio News
Phillips Publishing, Inc.

Satellite Communications
Cardiff Publishing Company

Saturday Review
Macro Communications

Science
American Association for the Advancement of Science

SMPTE Journal
Society of Motion Picture & Television Engineers

Special Libraries
Special Libraries Association

Technology Review
MIT Alumni Association

Telecommunications
Horizon House

Telecommunications Reports
Business Research Publications, Inc.

Telematics
Information Gatekeepers, Inc.

Television/Radio Age
Television Editorial Corporation

T.H.E. Journal
Information Synergy, Inc.

The New Yorker
New Yorker Magazine, Inc.

The TeleSpan Newsletter
TeleSpan

Times Educational Supplement
Times Newspapers Ltd.

Times Higher Education Supplement
Times Newspapers Ltd.

TVC
Cardiff Publishing Company

U.S. News and World Report
U.S. News and World Report, Inc.

Videocassette and CATV Newsletter
Martin Roberts & Associates, Inc.

Videodisc Teletext Magazine
Microform Review, Inc.

Videography
United Business Publications, Inc.

Videonews
Phillips Publishing, Inc.

Videoplay Report
C. S. Tepfer Publishing, Inc.

Video Systems
Intertec Publishing, Inc.

Viewdata & Videotex Report
Haines B. Gaffner, LINK

Vital Speeches
City News Publishing Company

Wilson Quarterly
Wilson International Center for Scholars

A report on how to develop complete independent study courses with commercially produced materials and supplement them with individually produced materials for cost effective programs of instruction.

Zigerell, James. **"Bullish on Telecommunications."** *Community and Junior College Journal,* May 1981, pp. 24-25.

A description of the American Association of Community and Junior Colleges' Task Force on the Uses of Mass Media for Learning; its objectives, activities and recent transition to the Instructional Telecommunications Consortium.

Zucker, Andrew A. **"The Use of Telecommunications in Public Education During the 1980's."** *Journal of Educational Technology Systems* Vol. 9(3) (1980-81), 229-239. An examination of six forces acting to stimulate the use of telecommunications in public education.

Research

Corcoran, Farrel. **"Processing Information From Screen Media: A Psycholinguistic Approach."** *Educational Communications and Technology Journal,* Vol. 29 (Summer 1981), 117-128.

A study of the utilization of linguistic perception research techniques to ascertain how screen media communicate.

Descy, Don E. **"Color in Media: Is It Really Worth the Extra Cost?"** *International Journal of Instructional Media,* Vol. 8(3) (1980-81), 261-266.

A study of the effect of color in media on the learning process.

Engel, F. L. and J. J. Andriessen. **"Educational Technology Research: Computer-Aided Learning of a Foreign Vocabulary."** *Educational Technology,* May 1981, pp. 46-52.

A report on findings of an experiment on computer-aided language instruction.

Pandolfi, Ralph R. **"Facts and Figures."** *Audio-Visual Communications,* June 1981, pp. 38-39.

A review of a study on utilization of multi-image production by commercial producers and users, and noncommercial producers and users.

Broadcast Television

Copyright Considerations for Institutional TV, by Lawrence G. Chester. *Educational and Industrial Television,* June 1981, pp. 64-67.

This article presents an overview of several major court cases that more clearly define the realm of the Copyright Act. The enactment of its revision, United States Code 17 (U.S.C. 17), raises a number of legalities in recording off-air, transferring films to tape, as well as editing and duplicating programs for distribution.

The Sound Recording Act of 1981 recognizes recording off-air in the home as fair use and limits the rights of the copyright holder as they pertain to the use of works he or she owns.

The doctrine of Fair Use has been interpreted in several ways, but is still in need of clarification as to how it applies to institutional use of programming taped off-air or segments taken from copyrighted programs not broadcast.

Four key points of the Fair Use doctrine are examined through an analysis of several major cases. These key factors include how a duplicated work is used, the nature of the material, how much of the program is recorded and the quantities produced, and the competitive nature or character of use. While precedents have clarified some areas of what constitutes fair use and what constitutes infringement of copyright law, there is still a sizeable area of institutional and corporate use which will remain unclear until the courts have ruled on it.

Working With Telecourses: A Cooperative TV Project in Indiana, by Jerold Gruebel. *T.H.E. Journal,* May 1981, pp. 56-59.

The Indiana Higher Education Telecommunications System (IHETS) has assessed its first-time experience in working with broadcast telecourses in this report. A comparison of a survey of enrollees at IHETS participating institutions with surveys conducted by Dallas County Community College District, Coastline Community College and the Station-College Executive Project in Adult Learning (Corporation for Public Broadcasting) revealed similar data.

A national review of telecourse audiences and viewing patterns noted that telecourse students tended to be older than their on-campus counterparts, predominantly female, and over 21 years of age. However, significant variations in preferred viewing times were reported.

The IHETS survey indicated that this statewide project was hindered by its inability to offer a degree program, and that promotional activities affected enrollments. Other issues not addressed by the survey are discussed as well as findings and conclusions drawn from the survey instrument.

Despite its problems, the project will continue for another year with careful assessment and the incorporation of these survey results into future plans.

Berenstein, Jeremy. **"Can TV Really Teach Science?"** *Dial,* June 1981, pp. 46-49. A critique of the treatment of popular science through television, particularly the series, "Cosmos."

"Good news, bad news in DBS spacerush." *Broadcasting,* July 20, 1981, pp. 23-27.

A review of proposals submitted to FCC for direct broadcast satellite frequencies and the impact the systems may have on television service.

Goldman, Ronald J. **"Pay Television as a Mode of Distribution for Science Programming."** *Journal of Educational Technology Systems,* Vol. 9(3), (1980-81), 247-259.

An examination of pay television industry and the opportunities for science programming.

Green, Alan. **"The Critics Be Damned: Full Speed Ahead for PBS."** *Videography,* June 1981, pp. 82-85.

A discussion of PBS' Grand Alliance as a remedy to the Administration's proposal for immediate cuts in the public broadcasting budget.

O'Rourke, James S. **"A Little Plain Talk About Television: Are You Sure It's What You're Looking For?"** *International Journal of Instructional Media,* Vol. 8 (1980-81), 213-220.

A review of research on the impact of television on learning.

Cable Television

The ABC's of Cable Programming, by Gerry Jordan. *TVC,* June 1, 1981, pp. 206-223.

The feasibility of and opportunities for cable educational programming are written from the cable operator's viewpoint in this article. The addition of educational features to cable's current fare of movies, entertainment, and sports makes a significant contribution to the diversity of the product.

Warner Amex has evolved a philosophy of educational programming that is local in focus, national in perspective, and is a useful model for other cable operators. That philosophy is to work first with the local educational community, complementing and extending the services already offered. Then programming provided by outside sources, such as satellite delivered services, is adapted and programming packages are developed.

Ascertainment of community needs is outlined, including factors such as value vs. costs, program purpose, recognition, access, and community input.

Examples of Warner Amex packages and others are described, including the Appalachian Community Service Network, which provides college credit courses, and the American Educational Television Network, which provides continuing professional education for such groups as dentists and lawyers.

Cable TV: Challenge of the 80's, by Mary Jo Manning. *TVC,* June 1, 1981, pp. 229-233.

Cable television now serves over 17 million homes after overcoming serious obstacles: economic recession, FCC signal and exclusivity rules, pay restrictions, and access requirements. There is much left unresolved, however, that will affect the future of the industry.

Continuing problems have to do with copyright, franchising, regulation, and the powerful competition resulting from the dramatic increases in new information services available via telephone, cable, broadcast media, as well as other entertainment media. In order to prosper, the cable industry must confront these issues and involve itself in innovative, effective methods of delivering services. AT&T looms as a formidable competitor since it can develop the software and equipment needed, test-market it, and then provide home information services.

Both the state and federal levels can impose regulations that hinder similar capabilities of cable. The pending U.S. Senate Packwood-Goldwater bill, S.898, is of particular significance as it establishes the potential for regulation of a cable system if its facilities become a bottleneck and video and data services cannot find a viable alternative delivery medium.

Opportunities exist, however, and uncertainty in the regulatory and legislative policy areas should not be cause for indecision now. Those who take the initiative may shape the ultimate policy regarding cable.

The Birth of a Wired Nation, by Ralph Lee Smith. *Channels of Communication,* April/May 1981, p. 32+.

In 1970, Ralph Lee Smith wrote for *The Nation* that the United States would soon be substantially "wired" from coast to coast for cable television. In this article, Smith takes a fresh look at cable, assesses its development, and reexamines his earlier conclusions. It is noted that having found the key to the major cities, cable television is spreading across America as rapidly as franchise procedures will allow; but the phenomenon includes issues that bear on the future of U.S. society.

Those issues include the following: Who will control these powerful new communications systems, and how much should the government regulate them? Who will have access rights to cable and how should that be used? What material should be allowed into the home? Is it healthy for the parties controlling the program sources to operate the cable systems through which they are delivered? Should telephone companies be allowed to operate cable systems and thereby deliver both television and telephone over a single wire? Should the federal government or the municipality regulate that delivery? How can the public respond legally if the cable franchises don't deliver what they promise?

The gradual development of cable is reviewed, including Community Antenna Television (CATV), Home Box Office, and RCA Satcom I satellite. Costs, services, and programming are discussed. Smith's 1970 recommendation is reaffirmed for Congress to designate cable a common carrier, like the telephone system, allowing it to be regulated so that owners of cable systems would forego all rights to program them.

Burnham, David. **"The Twists in Two-Way Cable."** *Channels of Communication,* June/July 1981, pp. 38-44.

A discussion of possible privacy abuses with the expansion of two-way, interactive television systems.

Christopher, Maurine and Bob March. **"Local Regulatory Fights Threaten Cable: NCTA."** *Advertising Age,* June 1, 1981, p. 1+.

Remarks of keynote speakers at the National Cable Television Association convention regarding the regulation of cable.

Dunn, Joe. **"Public Access Boon in Ohio."** *TVC,* May 1, 1981, pp. 40-41.

Norwood, Ohio is examined as a model of effective local programming in cooperation with a cable system programmer.

Hill, Arthur. **"The First Amendment: Cable's Ultimate Regulation."** *TVC,* June 1, 1981, p. 65+.

A look at a court case involving Utah State Senate and four local cable operations and the implications for First and Fourteenth Amendment rights of cable operators.

"The Race to Feed Cable TV's Maw." *Fortune,* May 4, 1981, pp. 308-310.

An overview of the variety of cable systems in operation, their programming and position in the market.

Hoarty, Dorinda. **"The Institutional Network."** *TVC,* June 15, 1981, pp. 39-42.

An examination of Omnicom Cablevision of Illinois' continuous cable loop among public institutions.

"Hughes Plans Cable Bird." *Cablevision,* May 25, 1981, pp. 34-37.

A discussion of Hughes Communications' plan to launch a domestic satellite and address the needs of cable.

Williams, Roger. **"What Is All This About Cable, the Shaky Future of Public TV, the 'Loss' of the BBC . . . ?"** *Dial,* July 1981, p. 14+.

An in-depth report on cultural programming in the cable industry with inserts discussing various aspects of cable technology, terminology, franchising processes, available cable services, etc.

Teletext/Videotext

Window on the World: The Home Information Revolution. *Business Week,* June 29, 1981, pp. 74-83.

The emergence of videotext — the generic label for home information retrieval systems – from science fiction to reality is detailed in this article. Hundreds of companies, many of them among the largest U.S. corporations, are considering the home information industry as the way to profitmaking in the 1980's.

They are confident that by 1990, videotext will be big business, and that the technology will change the way people shop, bank, work, and communicate, since they will be able to do all these things from home.

Among the signs of the coming revolution are the following: 1) telephone networks are being upgraded and more two-way cable TV systems are being built to shape the industry infrastructure; 2) AT&T endorsed videotex in May 1981 and announced that it is designing its own system; 3) public interest in transaction processing for financial services; and 4) the public is becoming more receptive to "space age" systems and is accelerating purchases of electronic products for the home.

One estimate indicates that 83 experiments in videotext are now being carried out by U.S. companies. Financial institutions, publishers, retailers, airline companies, and stock exchanges all stand to benefit from the potential of videotext technology.

Behrens, Steve. **"Text via TV."** NAEB *Current,* May 11, 1981, pp. 1-3.

A report on teletext tests undertaken in the U.S., and the adoption of one of three available standards for the technology.

"France Begins Large Scale Test of Videotext Service in 2,000 Homes." *Communications News,* June 1981, p. 16.

France conducts an 18-month trial of videotext.

Marsh, Ray. **"Widespread Use of Videotext Services Likely to Impact Virtually Everyone."** *Communication News*, May 1981, pp. 108-109.

A description of the Canadian Telidon system and a recommendation for its acceptance as the international standard for videotext.

Thompson, Tony, **"Schism Grows Over Teletext Standards,** *Advertising Age*, May 25, 1981, p. 76.

A report on the disagreement between North America and Europe on the adoption of an international videotext system.

Thompson, Tony, **"U.K. Counters Videotext Rebuffed by AT&T."** *Advertising Age*, June 1, 1981, p. 87.

The British retort in marketing battle to establish standard for videotext.

Computers

The Coming Struggle in Personal Computers by Bro Uttal. *Fortune*, June 29, 1981, pp. 84-92.

The personal computer industry has evolved from hobbyists as the prime marketing target to consumers generally, and now to the business and professional markets. Technology has developed almost too rapidly for the markets, and producers have vacillated in their strategies for marketing.

Currently, there seem to be four schools of thought about how to succeed. The three industry leaders are relying on business users but are trying to serve all market segments. For example, Apple Computer has sold thousands of computers to the Minnesota Educational Computing Consortium for classroom use. A second group of competitors, including Vector Graphic, is emphasizing computer systems tailored to particular industries, with prices running well above the typical $3,000. A third group is making highly specialized products. Hewlett-Packard has promoted a compact machine with a built-in printer, tape memory, and video monitor to its traditional market of scientists and engineers. A less expensive version is being pushed to reach other professional users who want a computer to do analytical work.

Finally, companies like Texas Instruments and Atari are gambling on a broad home market that does not yet exist. Although the home market will open up in time, most industry observers don't think it will become as important as the business and professional markets until sometime after 1985.

Ultimately, the key to personal computer growth will be the promotion of a "friendly, inexpensive computer that will appeal to everybody, not just advanced users."

Barrette, Pierre P. **"Teleconferencing with Microcomputers."** *Instructional Innovator*, May 1981, pp. 27-28.

A report on a demonstration application of microcomputer systems through microcomputer teleconferencing.

Brenner, Lisa P. **"On-Line Banking in Health Sciences Education."** *Journal of Educational Technology Systems*, Vol. 9(3) (1980-81), 213-227.

A discussion of the development of interinstitutional consortia for computerized test item banking.

"Computer Banking Tests in N.Y." *Advertising Age, May 25, 1981, p. 76.*

A look at how Citibank will test its own computer banking terminal this summer.

Cowen, Robert. **"New Literacy for the Computer Age."** *Technology Review*, May/June 1981, pp. 8-9.

A discussion of personal uses of computers in the future and their impact on the ways in which information is generated, acquired, disseminated, and used.

Gray, Robert A. **"Microcomputers: a Primer for Instructional Media Specialists."** *International Journal of Instructional Media*, Vol. 8(3) (1980-81), 207-212.

A description of microcomputer systems with emphasis on hardware, selection, and utilization.

Kadesch, R. R. **"Interactive Video Computer Learning in Physics."** *Journal of Educational Technology Systems*, Vol. 9(4) (1980-81), 291-301.

An analysis of the University of Utah's video computer learning project's interactive computer system.

Ketner, William D. **"A Computer-Video Experiment May Aid Signal Training."** *The Army Communicator*, Spring 1981, pp. 19-21.

A description of a U.S. Army Signal Center Training System utilizing a computer-assisted videodisc program.

States, David C. **"The Computer in Industrial and Vocational Training."** *Journal of Educational Technology*

SOURCESCAN

Sourcescan will bring you a review of a variety of books, research reports, and occasional papers. When possible, we will provide information on how to obtain these publications. However, none of the items listed are available from the Center.

Higher Education Utilization Study Phase I: Final Report, by Peter Dirr, Joan Katz, and Ronald Pedone. Corporation for Public Broadcasting and National Center for Education Statistics, Washington, D.C. 1981. 43 pp.

A survey by the Corporation for Public Broadcasting and the National Center for Education Statistics in cooperation with five higher education associations on institutional uses of television. An overall response of 94% by the 2,993 institutions in the universe revealed that 71% made some use of television.

HEUS Phase I: Final Report as well as a Technical Report with details on survey methodology is available from the Corporation for Public Broadcasting, Office of Educational Activities, 1111 16th Street, N.W., Washington, D.C. 20036.

An Administrator's Guide to Telecourses, by Louise M. Hewitt and Valerie Lynch Lee. Coastline Community College, Fountain Valley, California. 1980. 62 pp.

A guide to incorporating telecourses into instructional programs, getting courses broadcast in one mode or another, promoting courses within a local community, involving faculty in design and supportive instruction, assessing costs, and evaluating the effort. Available upon request from Coastline Community College, Fountain Valley, CA 92760.

A Survey of Early SUN Program Enrollees: Pre/Post Enrollment Decisions and Attitudes Regarding Their Continuing Education, Technical Report 5, by Laurence A. Brown. Division of Research and Evaluation, University of Mid-America. April 1981. 61 pp.

Report on a telephone survey of adults enrolled in State University of Nebraska (SUN) program at UMA, undertaken to determine the effects of their experiences on subsequent continuing education behaviors and attitudes. For copies, contact the author at University of Mid-America, Division of Research and Evaluation, P.O. Box 82006, Lincoln, NE 68501.

Calling the Tune: Communication Technology for Working, Learning, and Living, by Ted Carpenter. National Institute for Work and Learning, Washington, D.C. 1981. 80 pp.

A look at the wide range of technologies as they have affected the marketplace, public policy, and gov-

ernment regulation. One in a series of policy research monographs commissioned by the Project on Worker Education and Training Policies. Available from the National Institute for Work and Learning, 1211 Connecticut Avenue, N.W., Washington, D.C. 20036. $12.50 per copy.

Communications Technologies in Higher Education: 22 Profiles, edited by Ruth Weinstock. Communications Press, Inc., Washington, D.C. 1977. 157 pp.

Twenty-two profiles of technology-based delivery systems. These systems encompass uses of telephone, cable and broadcast television, videotape, and computers. Available from Communications Press, Inc., 1349 Connecticut Ave., N.W., Washington, D.C. 20036. Hardcover: $13.95; Paperback: $7.95; Looseleaf: $7.00. Postage: $1.25 first copy, $.75 each additional copy.

Directory of Federal Telecommunications Resources for State and Local Governments, prepared by Kim Degan and Raymond Gallagher. U.S. Department of Commerce, National Telecommunications and Information Administration, Washington, D.C. 1980. 33 pp.

A survey of federal agency programs and other sources of funding information and assistance in telecommunications applications. Copies can be obtained from National Telecommunications Applications, 608 13th Street, N.W., Washington, D.C. 20005.

Directory of Intra-State Educational Telecommunication Systems, Spring 1980, by Jerold Gruebel, W. Neal Robinson, and Susan Rutledge. Association for Educational Communications and Technology, Washington, D.C. 15 pp.

A directory of about 100 educational organizations in 44 states involved in telecommunications networking. Information includes where networks exist, who operates them, and what are their successes and failures. Also listed are organizations in planning stages as well as contact persons in states where no interconnects exist. Available from the Association for Educational Communications and Technology, 1126 16th Street, N.W., Washington, D.C. 20036. Attn: Publications Dept. $2.00 per copy.

Expanding Alternative Delivery Systems, by Jan Baltzer. Rio Salado Community College, Phoenix, Arizona. 1980. 31 pp.

A paper reviewing 18 telecommunications delivery systems with information about how and where they are being used to deliver instruction within higher education. A discussion of barriers to the use of these systems and ways to overcome barriers focuses on data about enrollments, course offerings, and technical aspects of the systems. An extensive resource bibliography and glossary of technical terms is included. Free copies available from the author at Rio Salado Community College, 102 North 40th Street, Phoenix, AZ 85034.

Instructional Television – Higher Education Without Commercial Interruption, by Carol Herrnstadt Shulman. AAHE-ERIC Higher Education Research Current. *AAHE Bulletin.* Vol. 33 (May 1981). 5 pp.

A short synopsis of videotechnology and its current uses in higher education. Included in this primer are discussions of economic factors involved in telecourse instruction and the growing popularity of consortial arrangements. A list of information resources is also provided. Available from the American Association for Higher Education, One Dupont Circle, Suite 780, Washington, D.C. 20036. $.75 per copy.

New Technologies in Education, by Lawrence Grayson. National Institute of Education, Washington, D.C. 1980. 35 pp.

This paper deals with new educational uses of videodiscs, telewriters, and computers. Available from the author, free, at the National Institute of Education, Room 611C, 1200 19th Street, N.W., Washington, D.C. 20036.

Telecommunications and Higher Education, edited by Marlowe Fiske, Walter Radzyminski, and Michael Spring. Institute for Higher Education, University of Pittsburgh. 1981. 94 pp.

This monograph discusses some of the potential alternatives educators need to be aware of in realistically planning for the future of higher education. Position papers on issues of telecommunications and the learning society, institutional change, and cable communications include responses from seven contributors. Write the Institute for Higher Education, University of Pittsburgh, 5501 Forbes Quadrangle, Pittsburgh, PA 15260 for copies. $5.00 each.

Systems, Vol. 9(3) (1980-81), 207-212.

A report on the use of computer-based education in three different vocational industrial training settings.

"Thinking Home Computer? Think Software First." *Changing Times.* May 1981, pp. 58-60.

A guide to home computer software.

Radio

Green, Alan. **"National Public Radio: Time of Reckoning."** *Videography,* July 1981, pp. 65-67.

A look at the successes of NPR and the effect of the Administration's budget cuts.

Nyirenda, Juma Esau. **"The Role of Educational Radio in National Development: A Review of Experiences in Developing Countries."** *International Journal of Instructional Media,* Vol. 8(3) (1980-81), 255-260.

A review of educational radio programs which have contributed to the national development of Third World countries.

von Hoffman, Nicholas. **"Mank and the One-of-a-Kind Network."** *Channels of Communication,* June/July 1981, p. 62+.

A look at Frank Mankiewicz, head of National Public Radio, and his role in the development of NPR into one of the leading forces in broadcasting.

"Want cable radio? How much? NPR asks." *Current,* June 29, 1981, pp. 1-4.

NPR explores the prospects of cable radio.

Satellites

Boor, John L.; Schaad, Douglas C.; Evans, Franklin W.; Dohner, Charles W.; and Schwarz, Roy M. **"Communications Satellites in Health Education and Health Care Delivery: Operation Considerations"** *Journal of Educational Technology Systems,* Vol. 9(4) (1980-81), 371-377.

A review of problem areas in satellite delivery of medical education programs, based on data collected from 222 satellite mediated broadcasts.

Gorton, Daniel W. **"Applications of Transportable Earth Stations."** *Satellite Communications,* June 1981, pp. 30-35.

A discussion of the criteria which mandate use of transportable earth stations and examples of services which fit those criteria.

Pottle, Jack T. **"Transportable Earth Stations: Lease or Purchase?"** *Satellite Communications,* June 1981, pp. 24-26.

An economic model for decision makers to address the ownership/lease option for transportable uplinks.

Teleconferencing

A Case Study: The Heliny Pulse of Medical Video Teleconferencing, by James W. Johnson. *Satellite Communications,* May 1981, pp. 19-23.

The health care community is leading the way with closed circuit telecasts by capitalizing on the very latest technology, video teleconferencing, to bring continuing medical education to professionals across the country.

This article reviews the complexities of coordinating a three-hour teleconference by focusing on three key problematic areas: technical and as-

thetic production considerations in the origination of the program; transmission and networking to about 20 cities; and display of received signal to groups of up to 1,000 doctors in each location.

The interactive audio capacity, an important element in teleconferencing, was coordinated in each location by an audio engineer. A combination of satellite two-way transmit loops and common-carrier long lines facilitated the interface of sound and picture.

The future of private networking is closely tied to the future of communications satellites, with economics becoming a primary factor in the expanded use of satellites. It appears that even large scale teleconferences can be produced at a cost equal to or lower than filming or taping the presentation, editing, and distributing prints.

Josephson, Sanford. **"Dramatic Growth Looms for Videoconferencing."** *Television/Radio Age*, June 15, 1981, p. 45+.

A report on growing use of satellite transmissions and concerns that a transponder shortage may occur.

Zack, Donna. **"Teleconferencing A Medical Meeting."** *Meetings & Conventions*, May 1981, p. 78+.

A profile of a multi-media medical education program for physicians delivered via teleconferencing.

Copy Delivery Systems

Videotapes Help University Students Learn How to Learn, by Brenda Foster Allen. *Educational Technology*, June 1981, pp. 25-27.

While strengthening academic skills has traditionally been viewed as the domain of secondary schools, a videotape instructional program which teaches strategies for studying and learning has been developed under a mini-grant at North Carolina State University (NCSU). Five one-half hour color tapes are available for campus-wide use at the Learning Assistance Center.

Because commercially produced materials were not being used frequently enough to justify costs, self-instructional materials were developed locally. The tapes were conceived and produced by NCSU faculty and students.

This article stresses the need to explore alternative means of providing students with basic instruction on how to achieve academic skills. Such modes of instruction free up faculty to spend more time in advisory and instructional roles. In conclusion, the videotape program is thriving because of a great deal of interest, subject-matter expertise, technology, and learning-theory knowledge.

The Videodisc: A Picture Book in the Round, by Harvey S. Long. *T.H.E. Journal*, May 1981, pp. 38-42.

Comparing the interactive optical videodisc to the book, this article reviews the success of the latter as a resource sharing medium and discusses how the videodisc might enjoy the same popular use in education if used to complement the printed text. Books and videodiscs are assessed for their ease of use, portability, relatively low cost, capacity, durability, and programmability.

Potential complementary uses of books and discs to enhance instructional capabilities in many discipline areas are reviewed. Examples of innovative instructional design are cited in the academic areas of chemistry, biology, zoology, and physics. Possibilities in areas of history and medicine as well as general guidance are considered.

Currently videodisc technology is inert because there has been no systematic development of creative uses. Publisher interest and support is needed to promote the growth of this technology. The way to maximize the possibilities of the videodisc for instruction is to start simple and develop an acceptable, complementary technology.

Lipson, Joseph. **"Design and Development of Programs for the Videodisc."** *Journal of Educational Technology Systems*, Vol. 9(3) (1980-81), 277-285.

An analysis of the design and development of instructional videodiscs.

Macovsky, S. J. **"Guide to Videodiscs."** *Money*, May 1981, pp. 141-142.

A guide to videodisc hardware.

Webb, Barbara. **"Maryland Creates First Video Production Network."** *American Libraries*, May 1981, pp. 24-25.

A look at the Maryland Library Video Network, which demonstrates how libraries are pooling technical video expertise and equipment.

Interactive Video

"Congressmen and Voters Participate in Two-Way Interactive TV Dialogue." *Communications News*, June 1981, p. 17.

Congressmen question QUBE cable TV audience on foreign policy, taxes, and budget in interactive video demonstration.

"Directory of Interactive Video Systems, Controls, Interfaces, Computers, and Video Program Producers." *Edu-*

MACROSCAN

Macroscan will report on the variety of conferences, workshops, seminars, projects, and other events involving the uses of telecommunications for higher education.

Higher Ed Cooperative Formed in Illinois

Planning and organizational meetings over the past 18 months have culminated in the formation of the Higher Education Cooperative for Illinois Telecommunications (HECIT) with the adoption of a constitution, by-law, and mission statement. More than 90 Higher education institutions in the state have indicated an interest in participating in the activities of HECIT. For further information, contact Jack C. Everly, Chairman, HECIT, Office of Instructional Resources, University of Illinois, 1110 West Main Street, Room 140, Urbana, Illinois 61801.

NSF Grant Funds Videotex Assessment

The Institute for the Future is conducting a technology assessment of videotex in the U.S. under a grant from the National Science Foundation. The project aims to examine the technological and social consequences of widespread implementation of teletext and interactive videotex as well as the public policy implications on these technologies over the next 20 years. Principal investigator is John Tydeman, Institute for the Future, 2740 Sand Hill Road, Menlo Park, CA 94025, 415/854-6322.

Pre-NAEB Conference Workshop Being Developed

Robert Carter, of the Kentucky Council on Higher Education, is developing a workshop on State-level Information Needs in Educational Telecommunications to be held October 30-31 prior to the NAEB Conference in New Orleans. Targeted for state coordinating/governing agencies, state departments of education, and

state broadcasting organizations, the workshop is being designed to determine information needs at the state level and to compare the utilization of telecommunications technology among educational institutions. For further information, contact Bob Carter, Coordinator, Telecommunications Consortium, Council on Higher Education, West Frankfort Office Complex, Frankfort, KY 40601, 502/564-5483.

Videotex '81 Draws 1,600 Participants

Nearly 1,600 met in Toronto, Canada, May 20-22 for Videotex '81. Individuals representing various private sector industries such as banking, retail, investment, news media, advertising, information, and technical service interests discussed recent world developments in videotex. Of major importance at the conference was the issue of establishing international videotex standards, triggered by an AT&T announcement suggesting a "North American Standard." In addition, concerns regarding information, education, and regulation were addressed. For further information contact David Carlisle, Infomart, 122 St. Patrick Street, Toronto, Canada M5T 2X8, 416/598-4000, Telex 06-2211.

cational and Industrial Television, June 1981, p. 35.

An equipment directory of interactive video systems and listing of producers and consultants who design and manufacture such systems.

L'Allier, James J. **"Some Basic Questions About Interactive Video."** *Educational and Industrial Television,* June 1981, p. 30.

Questions and answers to provide some basic understanding of interactive video.

Reisman, Sorel. **"What Is 'Interactive Video'?"** *Educational and Industrial Television,* June 1981, p. 29.

An explanation of "interactivity" and the technological development of interactive video and computer systems.

"Video Shopper Plan Debut." *Advertising Age,* June 1, 1981, p. 87.

A description of a cable shop-at-home service launched in New York.

Multi-Media Systems

"Getting Into Television! Johns Hopkins in the Telecommunications Era," *Maryland Telecom Update,* Spring 1981, pp. 3-5.

A report from the Maryland Center for Public Broadcasting on the wide range of audio-visual services available at the Johns Hopkins Hospital.

AERA and USC Form Two New Units on Adult Learning

The American Educational Research Association's new Division of Postsecondary Education has formed a special interest area in Adult, Continuing, and Lifelong Learning to be coordinated by Penelope Richardson, Assistant Professor, Higher and Postsecondary Education, University of Southern California. Anyone with an interest in contributing ideas for the division's research agenda should contact her at Waite Phillips Hall 701, University of Southern California, Los Angeles, CA 90007, 213/743-2310. Richardson also has been appointed director of the newly created Center for Research on Adults and Lifelong Learning at USC. The center seeks to address institutional and public policy issues concerning how to best serve adult learners with a particular interest in telecommunications.

Dartmouth Receives $200,000 for Videodisc Project

Dartmouth College has received a $200,000 grant from the Alfred P. Sloan Foundation to undertake a three-year experimental program for developing the instructional and archival potential of the optical-laser videodisc. Under the direction of psychology professor William M. Smith, this project will initially test videodisc technology for its practicality in storing and retrieving scholarly material.

The project will also explore special uses of videodiscs under microcomputer control and for self study. Collaborating on the project are the World Book Encyclopedia; the journal, *Cell Motility;* and the Sony Corporation, which is providing technical assistance and offering mastering services for some discs.

Professor Smith is Director of the Office of Instructional Services and Educational Research (OISER) at Dartmouth and can be reached for further information about the project at 3D Webster Hall, Hanover, New Hampshire 03755.

NASULGC Workshop Focuses on Cable

The Division of Urban Affairs of the National Association of State Universities and Land-Grant Colleges (NASULGC) held the first of a series of regional workshops on June 15 at the Raymond Walters College of the University of Cincinnati. The workshop focused on cable television and the urban university, with particular attention paid to ways in which urban universities can and should be involved in franchise negotiations and issues of concern in the development of telecourses for use in cable systems.

A packet of materials is available for $5.00 from Nevin Brown. Division of Urban Affairs, NASULGC, One Dupont Circle, Suite 710, Washington, D.C. 20036, 202/293-7120.

A second workshop on cable television and the urban university will be held for the Upper Great Lakes states at the University of Wisconsin-Milwaukee, October 2nd. Additional information is available from Nevin Brown.

Grant Program Available at NEH

The Higher Education/Regional and National Grants program of the National Endowment for the Humanities supports collaborative efforts of institutions which take a regional or consortial approach to the improvement of the teaching of the humanities. For further information about eligibility and deadlines for the submission of proposals contact Blanche L. Premo, Assistant Director, Division of Education Programs, National Endowment for the Humanities, Washington, D.C. 20506, 202/724-0311.

Harvard U. and M.E.T. Host Cable Conference

The Monroe C. Gutman Library of the Harvard Graduate School of Education and Massachusetts Education Television sponsored a conference on the educational uses of cable TV May 15 and 16 featuring speakers and panelists from more than 30 organizations and cable corporations. Panel presentations and working sessions introduced participants to the educational services cable can offer and to the steps they must take to ensure that these services are guaranteed in local cable franchise contracts.

The conference concluded with an address by Ralph Lee Smith, author of *The Wired Nation,* who challenged participants to become active in the national debate surrounding cable and other new communications media.

For further information on the conference contact Phillip Miller, Massachusetts Educational Television, The Massachusetts Department of Education, 54 Rindge Avenue, Cambridge, MA 02140. Audiotapes of the conference sessions are now available for purchase. For an order form write to: Cable Conference, Gutman Library, Harvard Graduate School of Education, Appian Way, Cambridge, MA 20038.

Computer Conference Held in Texas

The third annual National Educational Computing Conference (NECC-81) was held at North Texas State in June. Co-sponsored by 15 professional organizations, the conference featured sessions on developmental, administrative, instructional, research, and technical topics. Over 150 authors are represented in *Proceedings of NECC 1981*, available for $70 from Jim Poirot, Chair, Department of Computer Sciences, NT Box 13886, North Texas State University, Denton, TX 76203.

NFLCP Convention Held in Atlanta

The National Federation of Local Cable Programmers hosted nearly 600 attendees at its Fourth Annual Convention, July 10-12 in Atlanta. Educators, city officials, cable company representatives, and access producers gathered to participate in 63 different workshops which included Franchising and Renegotiations, Integrating your Programming, Future Technology/Policy, and Government Utilization. For audio tapes, contact NFLCP, 4601 S. 31st Road, A-1, Arlington, VA 22206, 703/820-8890.

Contributors

Contributors to this issue of TELESCAN are listed below. The efforts of these individuals have been critical to our monitoring activities. We urge those of you who wish to become part of this important information network to submit to TELESCAN items of potential interest to our broadly based audience.

Frederick Baus
The Association for Higher Education of North Texas
David Bowden
University of South Carolina
Nevin Brown
National Association of State Universities and Land-Grant Colleges
Sue Miller Buske
National Federation of Local Cable Programmers
Robert Carter
Kentucky Council on Higher Education
Robert Dean
Georgia Institute of Technology
Peter Dirr
Corporation for Public Broadcasting
Susan Fratkin
National Association of State Universities and Land-Grant Colleges
Jinny Goldstein
Public Broadcasting Service
Karen Heald
National Telecommunications and Information Administration
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Chicago Metropolitan Higher Education Council
Karen Kearns
National Public Radio
Phillip Miller
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Jane Richards
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Penelope Richardson
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American Association of State Colleges and Universities
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LEGISLATIVE REVIEW

This is the first of a new TELESCAN feature that will appear regularly—legislative reports on higher education and telecommunications issues by attorneys from the Washington-based law firm of Dow, Lohnes and Albertson.

Federal Dollars Down, But Entrepreneurs May Flourish

by Michael B. Goldstein and Kenneth D. Salomon
Dow, Lohnes & Albertson

While direct federal support for telecommunications has been sharply reduced, some changes in the law leave hope for the more rapid development of alternatives to the public trough. These changes may have a significant impact on the use of public telecommunications facilities as a part of our nation's learning system.

The Public Broadcasting Amendments Act of 1981, part of the Omnibus Budget Reconciliation Act, reflects two administration thrusts: drastically reduced levels of federal financial support, and the creation of mechanisms to offset those revenue losses through development of entrepreneurial efforts.

Public broadcasting faces a reduction of dramatic proportion. The Amendments Act sets a FY 1984–86 *authorization* level for the Corporation for Public Broadcasting of $130 million per year. This compares with a FY 1982 authorization level of $220 million and an *appropriation* of $172 million. Similarly, the equipment-funding activities of the National Telecommunications and Information Administration's Public Telecommunications Facilities Program were cut from a $40 million FY 1981 authorization to $20 million for FY 1982.

To minimize the tension between the need for support of local television stations on the one hand and for national program services on the other, Congress allocated specific CPB funds for station and program support. Starting in FY 1984, 90 percent of CPB's appropriation is to be used exclusively for station and program support. Seventy-five percent of that amount is to be allocated for TV station support, of which 20 percent is to be reserved for national TV programming. The balance goes to public radio, divided equally between direct station grants and national programming.

Theoretically, passing more dollars through to the stations will increase local innovation and, through common efforts, improve nationally produced programming as well. Whether this will do so, particularly in highly specialized areas such as instructional broadcasting, remains to be seen.

The Amendments Act seeks to encourage the public broadcasting community to make up the loss of federal dollars through its own efforts, and it offers some new ways of generating revenue. These provisions complement recent action by the Federal Communications Commission giving public stations far greater leeway in fundraising.

The new law authorizes stations to lease federally funded equipment for profit making purposes so long as that use does not interfere with the *primary* use of the equipment for public broadcasting. Aside from the obvious financial incentive to put equipment to more efficient use, this provision opens the door to the establishment of working relationships between public telecommunications entities and the private sector, including those involved in education and training.

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CAPITOLSCAN

Washington-based, national initiatives involving uses of telecommunications in higher education.

Annenberg Project Advances As CPB Issues Funding Announcement and Proposal Guidelines

On September 22, the CPB issued the first funding announcement and proposal application format/guidelines for the Corporation for Public Broadcasting/Annenberg School of Communications Project. These guidelines were approved by the project's council at its September 18 meeting.

The project will fund the development of programs and projects that would be used by institutions of higher education generally, but not exclusively, for baccalaureate degree credit. Proposals must address one or both of the project's goals: "to create one or more significant collections of new, innovative, high quality, college level materials," and "to demonstrate the use of communications systems for addressing unique higher education problems." The scope of the project is currently being kept broad to encourage the most promising and imaginative proposals.

Primary target audiences are those persons with an interest in college-level education but for lack of time, financial or instructional resources, or other reasons, are unable to pursue it. Other target audiences might include traditional college students and enrolled students who might benefit from the materials.

In addition to these general requirements, all proposals must meet the following common criteria:

- innovate, complement, or improve what already exists without duplication;
- seek and seize opportunities, plans, and ideas that promise to make significant contributions to the project's mission, but for which venture capital is required; and
- include a strong evaluation component.

The deadline for the receipt of proposals for the first round of awards was November 2, 1981. CPB expects to make those awards in January 1982. In recognition of the short timeline for this submission, CPB has also announced the deadline for the second round—April 5, 1982—for awards to be made in July 1982. It is anticipated that $5 million will be awarded in each round.

An external review procedure will assist the project director and the staff in deciding which proposals to recommend for funding. Proposals that are judged by the staff to be generally appropriate and complete are evaluated by academics and others knowledgeable in the areas of the proposal. Final decisions must be approved by a majority of the council and the affirmative vote of the project director.

The funding announcement and proposal format/guidelines providing detailed information on the criteria for submitting proposals are available from CPB/ASC Project, Corporation for Public Broadcasting, 1111 16th Street NW, Washington, DC 20036; 202/293-6160.

Joint Council Continues Effort to Preserve ITFS

The Joint Council on Educational Telecommunications (JCET) is continuing its effort to preserve education's reservation of 28 television channels in the 2500 MHz band for the Instructional Television Fixed Service (ITFS). JCET is concerned about reports in the cable television press suggesting that the Federal Communications Commission (FCC) may grant construction permits for one or more multipoint distribution systems (MDS).

MDS is a microwave point-to-point service used chiefly to transmit pay television programming to apartment complexes and private homes. Educators have an interest in MDS technology because, like ITFS, it has a reserved band of channels. ITFS, however, has a reservation of 28 channels, whereas MDS has only two available channels. The FCC is considering three interrelated rule making proposals, the net effect of which would be to cancel the educational reservation and to open some or all of ITFS's 28 channels to MDS.

In March 1980, JCET joined the Corporation for Public Broadcasting, the Public Service Satellite Consortium, and other groups in filing comments, reviewing comments of others, and submitting to the FCC reply comments on issued notices of proposed rule making. Consideration of all arguments put forth is still underway by FCC staff and the matter has not yet come before the Commission. For further information, contact Frank Norwood, JCET, 1126 16th Street NW, Washington, DC 20036; 202/331-0660.

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ACSN Delivers Higher Education Programming For Adults Via Cable

More than 200 cable systems throughout the U.S. now carry daytime programming available through the Appalachian Community Service Network, permitting active participation by 100 colleges, universities, and other organizations. A schedule consisting of college credit television courses, professional development opportunities, personal enrichment, and vocational studies provides an assortment of educational opportunities for adults.

A recent study of the Appalachian Community Service Network viewers indicates that personal educational enrichment is a primary viewing motivation. More than 36 percent of respondents indicated an interest in formalizing the learning process with college credit at both the undergraduate and graduate levels. A similar percentage desired more opportunity for professional development that could lead to career advancement.

The marriage between cable television and education is a growing phenomenon. Many franchises dedicate one or more channels of their systems to higher education, independent of the channels made available for K-12 services. ACSN's popularity is due, in part, to the interest of local colleges and universities in providing extensive programming on their cable channels.

ACSN delivers 64 hours per week of programming that is readily accessible via satellite to any cable system equipped with SATCOM I receiving equipment. Using ACSN permits colleges to put a maximum effort into the promotion, recruitment, retention, and instructional management tasks, with only a minimum effort needed for the scheduling of programming. ACSN's programming package allows colleges to tape and replay programs and courses. Thus, a channel can be programmed for a full 18- or 24-hour day with minimal expense or administrative difficulty to the participating institutions.

Preliminary data for the fall semester indicate that some 40 colleges and universities will offer credit for one or more of the 10 courses currently on the schedule. Additionally, some 50 colleges, universities, businesses, hospitals, and social agencies will participate in the wide variety of continuing education opportunities also scheduled in the next year.

Analysis of continued ACSN growth and student and college success with ACSN-delivered television courses will be reported regularly in *TELESCAN*. For more information, contact ACSN at 202/331-8100.

LEGISLATIVE REVIEW

Direct Federal Support for Telecommunications Programs is Sharply Reduced by Administration

continued from p. 1

Congress also authorized the creation of a special commission to study financing alternatives for public broadcasting, including an 18-month experiment allowing 10 public radio and 10 public television stations to broadcast what would amount to commercials. However, the new law also has a kicker: any unrelated business income tax paid by a public broadcast station receiving CPB funds is effectively doubled, in the form of an equal-sum refund to CPB.

Aside from federal funds funnelled through CPB, the outlook for federal support for telecommunications linkages is, at best, uncertain. Educational television programming under Title III of the Elementary and Secondary Education Act seems likely to retain its $6 million funding level (or a proportional share in the case of a department-wide reduction), but the Telecommunications Demonstrations Program, formerly funded under the Department of Education's Office of Educational Research and Improvement, is essentially inactive. Likewise, the National Institute of Education, which has a long history of support for instructional telecommunications, has had its authorization *ceiling* reduced to $55.6 million, from a 1980 *appropriation* of nearly $75 million. Similar reductions in most other categorical programs are likely to limit the availability of flexible funding used in the past to initiate innovative learning-telecommunications linkages.

On the other side, however, is the shift to block grants. While all analyses point to a net *reduction* in aggregate funding for the program services bundled together into the block grant programs, there will be a new opportunity for educators and broadcasters to lobby their states instead of their more distant federal bureaucrats for a share of these resources to expand learning and telecommunications activities.

The net result of the current changes in the laws that fund and control both education and public telecommunications is an anomaly: a certainty of fewer federal dollars together with the opportunity to take advantage of alternative sources of revenue.

Benton Foundation Funds LPTV Study

The Benton Foundation (Washington, DC) has provided the Corporation for Public Broadcasting with a $20,000 grant to study the prospects for and economic viability of noncommercial low power television (LPTV). With matching funds from CPB, the study will examine operating, financing, and programming plans for current LPTV applicants; develop options for financing, management, and programming sources; and provide a general background of regulatory and economic issues pertaining to the operation of LPTV stations.

While the potential of LPTV for higher education institutions is an area to which greater attention is needed, Steve Symonds, director of Policy and Administration, CPB Office of Telecommunications, reports that the study will offer a broad look at LPTV and the potential for relationships with a variety of institutions as well as other delivery systems.

The research firm of Bloch, Butterfield and Riely will conduct the study. It is anticipated that the findings and analyses will be submitted to the FCC for consideration in its rule making on LPTV. A report on the study should include five to six model LPTV stations and policy recommendations. It will be available from the Corporation for Public Broadcasting Office of Telecommunications, Policy and Administration, by the end of December, 1981.

TELESCAN

In the next issue . . . .

- A complete listing of FIPSE-funded projects in telecommunications.
- A report on an instructional design workshop—held at the Open University of Nigeria.
- Review of legislation affecting higher education and telecommunications by Michael Goldstein and Kenneth Salomon.
- Printscan review of over 75 periodicals covering September through November.
- More current resources on telecommunications and its applications for higher education.

PBS Announces Winter/Spring Adult Learning Schedule

Beginning January 1982, PBS will offer its second schedule of adult learning programming with seven courses for the winter/spring academic terms. Colleges can license these television courses from PBS through cooperating local public television stations. The winter/spring 1982 schedule brings the number of adult learning programs available through PBS to 11, a number that will grow as the PBS Adult Learning Service continues to develop.

Colleges interested in using any of the adult learning programs distributed by PBS pay a modest license and per-student fee for each series. Through the payment of these fees, institutions are licensed to record the series for the period of the license (usually one academic term) for telecourse students at locations either on- or off-campus. Licensed institutions are also provided with a faculty and administrator's guide for each course. Local broadcast schedules for the telecourses are determined by the licensed colleges in cooperation with their local public television stations.

PBS initiated a series of steps to increase input into the selection of programming for future adult learning schedules from participating colleges and stations. One of these steps was a national program screening in mid-October to enable colleges and stations to indicate their program preferences. Survey instruments were also sent to colleges, stations, college administrators, and students to gather information on educational programming and administrative issues.

Another important development for users of the PBS Adult Learning Service is the mid-November announcement date for the fall 1982 schedule, providing colleges and stations with more than nine months of lead time. This substantial lead time has been a primary objective of the PBS/PTV-3 Adult Learning Service since its inception in the fall of 1980, so that colleges and stations can make the most effective use of the available series.

For information on the PTV-3 Adult Learning Service and course information, contact the adult learning liaison at your local public television station or the PBS/PTV-3 Adult Learning Service at 202/488-5360.

PRINTSCAN

Abstracts and bibliographies of articles appearing in periodicals from mid-July to mid-September 1981.

Innovative Concepts

Living with Technology: Trade-offs in Paradise, by Samuel C. Florman. *Technology Review,* August/September 1981, pp. 25-35.

The concept of runaway technology has become the vogue among academics. Although technology has been blamed for many of the world's ills, it is actually a collective expression of human desires, creativity, and perseverence. The American pattern has been one of progress, setback, and renewed creative effort. Significant technological "failures" have often been followed by even more dramatic successes.

It is important to remember, however, that disappointments have not been limited to technology—a fact that the antitechnologists usually choose to ignore. For example, there have been disappointments in the labor movement, the educational establishment, and efforts at crime prevention.

In spite of technologists' grandiose plans, there can never be a technologically-based utopia, because there is no agreement on what form that utopia would take. It is easy to feel that technology is out of control or that technologists are leading the nation astray, but technology is still very much under society's control. To see technology "optimistically" or "pessimistically" is not productive. It becomes more mature to see the dangers but have no foolish illusions about what can be accomplished, yet still want to move on and actively seek to realize the constantly changing vision of a more satisfactory society.

New Telecom Systems Will Meet the Needs of Higher Education in the 80's, by Jerry Shannon. *Communications News,* September 1981, pp. 88-89.

A review of the latest telecommunications service offerings reveals that a telecommunications revolution has been in full swing for the past decade. It has greatly assisted in the concept and development of total management information systems (MIS). The results of this continuing revolution are just becoming apparent and felt by the average business service telephone user. However in the next decade, the full impact will be felt by just about anyone who has access to a telephone. As a result of this expanding revolution, present telecommunications systems and programs in higher education will never be the same.

The structure of the telecommunications industry is changing rapidly due to competition in certain areas, such as terminal equipment and private line transmission services. Now, however, Congress and the Federal Communications Commission are moving to deregulate and open to competition all but the most basic telephone services. For campus users, all this change means: using new telecommunications systems and services to enhance the cost effectiveness of their MIS; learning to operate in multi-vendor environments for all services while keeping compatibility in mind; dealing with an increasing number of services alternatives; and learning to contract for services without the protection afforded by tariffs and regulatory agencies.

Most colleges and universities have not yet geared up for this revolution. They must become aware of the changes and the options open to them in such areas as electronic mail, message switching, word processing and electronic typewriters, viewdata and other office database systems, environmental control, and building security.

Baughcum, Alan. **"Imposing Structural Forms on the Rapidly Developing Telecom Markets Inappropriate."** *Communications News,* August 1981, pp. 24-25. A discussion of the development and impact of technological change and the appropriate policies for regulation of new technologies.

Borich, Gary D. and Ronald P. Jemelka. **"Definitions of Program Evaluation and Their Relation to Instructional Design."** *Educational Technology,* August 1981, pp. 31-38. An examination of four approaches to evaluation and how each may be applied to instructional programs.

Dick, Walter. **"Instructional Design Models: Future Trends and Issues."** *Educational Technology,* July 1981, pp. 29-32. An examination of the status of instructional design models as well as emerging trends and issues.

Fleming, Malcolm. **"Characteristics of Effective Instructional Presentation: What We Know and What We Need to Know."** *Educational Technology,* July 1981, pp. 33-38. A discussion of instructional technology as an applied science and the relation between instructional presentation and learner response.

Nash, Deanna C. and David A. Bollier. **"Protecting Privacy in the Age of Hometech."** *Technology Review,* August/September 1981, pp. 67-75. A discussion of the risks to the privacy of individuals and businesses involved in using interactive systems.

Wildman, Terry M. **"Cognitive Theory and the Design of Instruction."** *Educational Technology,* July 1981, pp. 14-19. An analysis of how cognitive theory can be used in the field of instructional design.

Wollman, Jane. **"New Technologies: Do the Customers Want Them?"** *Videography,* September 1981, pp. 101-103. A report on a survey undertaken to assess consumer attitudes toward various technologies and new types of programming.

Legislative Issues

Another Round of Copyright, by David Price. *Cablevision,* July 27, 1981, pp. 49-59.

Three bills on cable television copyright have been introduced in the House Judiciary Committee's subcommittee on Courts, Civil Liberties, and the Administration of Justice. They represent fallout from the Copyright Act of 1976, which was a pivotal point for the cable industry.

The Act established the arm's length relationship between copyright owners and cable operators, and also officially underscored the rift between the Community Antenna Television Association (CATA) and the National Cable Television Association (NCTA) over the compulsory licensing mechanism (fee schedule) that was agreed upon by NCTA and the Motion Picture Association of America, but not by CATA.

The legislation now before the House results from the copyright owners' opposition to the inequity of the fee schedule based upon the huge profits gained by the cable companies. Other elements of the legislation that are being challenged by the lobbying efforts of cable operators are: repeal of compulsory licensing; reimposition of distant signal and syndicated exclusivity rules; expanded jurisdiction of the Copyright Royalty Tribunal; and the imposition of copyright liability on resale common carriers.

"FCC Update." *CPB Report,* August 1981, p. 1+. A review of regulatory matters pending and forthcoming before the FCC.

"Sticky Issue in WGN-United Video Case." *Broadcasting,* September 7, 1981, p. 89. A report on a copyright case in Chicago dealing with a common carri-

er's transmission of broadcast signals to cable systems.

Broadcast Television

"Citizen Groups Blast Senate Deregulation Proposals." *Broadcasting,* July 27, 1981, p. 98. A report of a press conference held by more than 30 citizen groups and labor unions protesting broadcast deregulation legislation passed in a Senate budget bill.

del Solar, Daniel. **"Journey to the Center of the Corporation for Public Broadcasting."** *The Sky's No Limit,* #2, pp. 1-4. A critical view of the inner workings of the Corporation for Public Broadcasting.

"FCC Expected to Approve MDS for Salt Lake City." *Broadcasting,* August 17, 1981, p. 106. A report on FCC authorization of an experimental eight-channel multipoint distribution service system for Salt Lake City.

"FCC Gets Public TV Ad Plan." *Advertising Age,* August 3, 1981, p. 63. A report on legislation that would allow public broadcasters to test whether advertising revenue can replace the loss of federal funds.

Lippert, Barbara. **"PBS Counts the House."** *Advertising Age,* August 3, 1981, pp. S17-S18. An account of PBS' measurement of public television audiences.

Prescott, Peter S. **"The Trashing of Public Television."** *Channels,* August/September 1981, pp. 11-13. An argument against public television's noncommercial advertisements.

"Public Broadcasting Gets Gift of 'Annie.'" *Broadcasting,* August 24, 1981, p. 48. A report on the donation of a major motion picture premiere as a fundraiser for the Public Broadcasting System.

"Using Commercial Broadcasting to Sell Noncommercial Spots." *Broadcasting,* September 7, 1981, p. 27. A commentary on alternative financing proposals for public broadcasting, and the prospect of the loss of PBS' program identity with the selling of advertising time on noncommercial stations.

Cable Television

Cable Videotext Ventures Aim at Getting There First, *CableAge,* July 27, 1981, pp. 23-26.

Cable television interests are beginning to make their moves into the videotext era with the objective of "getting there first," i.e., beating broadcast television to the home user. (Videotext systems are a method of delivering text and graphic messages via display on a television receiver or computer monitor.)

Common standards and costs are potential problem areas, but there are examples of electronic information delivery into the home where cable TV is ahead. Today, the conventional wire services, such as the Associated Press are being joined by the publishing industry (e.g., The New York Times) in system ownership and/or as partners in tests.

Several types of services are possible. Videotext systems are referred to as either viewdata, which permit users to request and have displayed any of up to 100,000 stored "pages" of information or teletext, which continuously rotates a bank of about 100 pages of information to be called forth by the user. Videotext systems can be classified in five transmission categories that involve telephone lines. However, its development beyond the experimental stage is hampered by a lack of uniform standards—a subject that the Federal Communications Commission is now considering.

In the meantime, several experimental projects are underway. From a cable TV standpoint, the most meaningful program so far will be with INDAX in Omaha and, subsequently, New Orleans. Sponsored by Cox Cable, it is being approached as a business venture, not a test. Subscribers will be offered the service for an incremental charge on monthly bills. Users will be able to access United Press International news as well as other feature stories and articles.

Cable and Black America—Respect Us or Expect Us, by Arthur Hill, *TVC,* August 15, 1981, pp. 80-86.

Black Americans are demanding more performance from cable companies serving areas with large minority populations. Minorities within the industry are complaining that the record of the cable industry on employment of minorities—and especially Black Americans—has been poor. Statistics show that, overall, minority employment is between 12% and 13%. Affirmative action programs, minority ownership, and access to minority-originated programming have become pressing issues for the cable industry.

Leaders of the black community have not put a high priority on cable programming—being more concerned with social issues. Blacks within the industry recognize that cable can be a powerful communications tool in changing stereotypes about minorities. They want programming to reflect on the black experience in America in a positive way. They also want affirmative action programs that will enable black entrepreneurs to control the product and the distribution system. Equal opportunity

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lawyers are recommending that cable operators make every reasonable effort to attain the equal employment opportunity goals of the Federal Communications Commission.

Community Programming Continues Gradual Growth, *CableAge,* July 27, 1981, pp. 18-22.

Although community programming has yet to become a major thrust of cable systems nationally, it is continuing to grow as part of operators' total packages. The emphasis appears to be more on "access programming" than on local origination by systems themselves. Access, which is programming produced by and about people within the community, is seen as having more potential than local origination. Its content is generally controlled by the community-at-large and usually there are no commericals.

Access facilities may be operated by a consortium of several municipalities, as is the case with the Miami Valley (Ohio) Cable Television Council. Here, six urban communities in the Dayton area negotiated a franchise that offered six channels (two each for public, municipal, and educational access) and provided for a community video center.

Community access programming has also been undertaken by Cable Atlanta in Georgia, where it is viewed as the only kind of local programming that will survive. Nine access channels are planned in Atlanta. Other systems in New Jersey (Suburban Cablevision Ltd.) and Texas (Golden Triangle Communications) that focus on local newscasting and other community programming are also underway.

In addition to community programming operations whose facilities are both institutionally and multi-municipally operated, there are also a number of places where a nonprofit community organization runs the access facilities. One of the oldest of these is Channel 3 in Bloomington, Indiana, which responds to request programming.

"AETN Seeks Ad Dollars for Educational Shows." *Broadcasting,* August 10, 1981, p. 69. A report on AETN's solicitation of underwriters for a broadcast/cable network which will carry continuing education programming for professionals.

Applebaum, Simon. **"Video Manufacturers Cater to Cable."** *Cablevision,* July 20, 1981, pp. 46-53. A report on the booming cable equipment market and manufacturers' efforts to tap into the potential sales revenues of cable.

"Cable TV: Coming of Age." *Newsweek,* August 24, 1981, pp. 45-49. A review of developments leading to the cable television revolution; variety of programming choices; and ultimate impact of cable on American domestic life.

Caranicas, Peter. **"A Cable Banquet."** *Saturday Review,* August 1981, p. 71. A guide to the types of services being offered over cable.

Dabney, Anna and Paul Harrington. **"Bay Area Community College Creates Cooperative Local Programming Links."** *Community Television Review,* July 1981, pp. 10-11. A description of Peralta Television, a cooperative cable channel operated by a community college and a cable system.

"For Cable Television, the Play's the Thing." *Business Week,* September 14, 1981, pp. 35 and 37. A report on new cable services that offer taped versions of Broadway shows.

Gosman, Neal. **"The St. Paul Cable Coop Experience."** *Community Television Review,* July 1981, pp. 12-13. An examination of the cooperative concept of a privately owned and controlled cable communications system developed in St. Paul, Minnesota.

Henderson, Vikki. **"Interactive Services: Are MSOs Convinced?"** *TVC,* July 15, 1981, pp. 39-40. An overview of the views and concerns of various executive officers of major cable television systems on the potential of two-way interactive services.

"Home, Sweet Home—Wired for Leisure." *U.S. News and World Report,* August 10, 1981, pp. 63-64. A look at the home entertainment market spurred by the explosion of technology, an aging population, and skyrocketing transportation costs.

"How Cable TV Success Hinges on Satellites." *Business Week,* September 14, 1981, pp. 89-90. A discussion of the increased demand for satellite time and the shortage of satellite space which has created a buying war among cable programmers.

Langley, Michael. **"Expectations vs. Reality in Atlanta."** *Community Television Review,* July 1981, pp. 28-29. A profile of the experiences of Atlanta, Georgia, in its franchising interactions with cable companies.

Mann, James. **"What the TV Revolution Will Bring Into Your Home."** *U.S. News and World Report,* September 14, 1981, pp. 67-68. A report on new video services being made available to television viewers via new technologies.

Marks, Jill. **"A New Look for NECTA."** *TVC,* August 15, 1981, pp. 115-121. A review of the highlights of the 1981 New England Cable Television Association Convention.

"More on Copyright From Register Ladd." *Broadcasting,* July 27, 1981, pp. 99-100. A report on the remarks of Register of Copyrights, David Ladd, before a House subcommittee considering

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compulsory licensing for cable systems.

Morner, Aimee L. **"Why Rich Investors Are Hooked on Cable."** *Fortune,* September 21, 1981, pp. 183-186. A discussion of tax shelters available to limited partnerships that finance cable television systems in small towns.

Rice, Jean. **"Old and New Cable Issues Confront Local, State, and Federal Policy Makers."** *Community Television Review,* July 1981, pp. 14-18. An examination of local and state regulatory problems dealing with franchising, ownership, technical design, and consumer protection within cable systems, and the federal role.

Richter, Jerry. **"Berks Community TV's Interactive Ability Is Integral Part of Reading City Government."** *Community Television Review,* July 1981, pp. 8-9. A profile of a nonprofit, community-based program of municipal government hearings delivered via interactive cable.

Richter, Jerry. **"The Misuse of the Term 'Interactive.'"** *Community Television Review,* July 1981, pp. 34-35. A clarification of the term "interaction" as applied to cable systems.

Rosenthal, Edmond. **"STV Growth Strategies Change As Market Narrows."** *CableAge,* July 27, 1981, pp. 6-10. A look at new opportunities for subscription television to evolve into programming operations that use low power TV stations, multiple distribution systems, and direct broadcast satellites.

Winston, Brian. **"Showdown at Culture Gulch."** *Channels,* August/September 1981, pp. 45-48. A look at the corporate strategies behind the networks' entrance into cable TV programming.

Teletext/Videotext

"Teletext Standard Put Before FCC by CBS and TVC." *Broadcasting,* July 27, 1981, pp. 102-103. A report on two proposals on teletext technical standards submitted to the FCC for consideration in rule making.

"Europe Forges Ahead With TV-Based Information Services." *Communications News,* August 1981, pp. 36-38. An examination of British and French videotext services and the effort to develop an international standard.

"CBS Briefs Stations on Teletext Progress." *Broadcasting,* September 7, 1981, p. 72. A report on a two-day teletext seminar held by CBS to inform affiliates about ongoing and future teletext experiments and how local stations can participate.

"Electronic Publishing Discourse." *Broadcasting,* September 7, 1981, p. 72. An overview of a law review article that offers basic suggestions for policy makers involved in developing frameworks for the electronic publishing medium.

"Catching Up With Cable: Teletext for Commercial TV." *Broadcasting,* September 7, 1981, p. 70. A look at WFLD-TV's (Chicago) "vision" teletext service which, unlike conventional teletext, uses the entire television channel and does not require special decoders.

Computers

Computer Technology and Instruction, by Barbara Kurshan. *Educational Technology,* August 1981, pp. 28-30.

Issues facing instructional designers, if they are to exert some degree of control over the use of microcomputers for instructional purposes, are discussed. Although computers have been used by educators since the late 1950's, they have generally been assigned small roles, mostly for administrative and business-oriented matters. This has been because of (1) a lack of high-quality courseware, (2) a lack of trained teachers and administrators, and (3) the previously high cost of providing computing to most schools.

The development of inexpensive microcomputers has eliminated the cost factor as a deterrent, but the need for courseware, trained teachers, and administrators remains. Therefore, instructional designers must be prepared to deal with several issues, including microcomputer selection, computer literacy for students, and computer courseware development.

The successful future of learning with microcomputers depends upon the assertive roles instructional designers assume. They must become conflict mediators in the field of education and learning theory; they must act as facilitators, directing the course of study for students; they should be evaluators of course development; and they should serve as decision makers along with computer scientists. Microcomputers may, in fact, hold the key to motivating educators to improve education via the use of computers, and instructional designers should assume responsibility to aid that process.

Gillespie, Robert G. A review of **"The Fourth Inventory of Computers in Higher Education."** by John W. Hamblen and Carolyn P. Landis, in *The Journal of Higher Education,* Vol. 52, July/August 1981, pp. 446-447. A discussion of a book about four NSF-supported studies on the use of computers in higher education over the past 15 years.

Pattie, Kenton and Mary Ernst. **"Finding Funds for Microcomputers."** *Instructional Innovator,* September 1981, pp. 32-33. A report on funding sources for microcomputers in education.

Radio

"NFCB Delegates Told to Increase Their Visibility." *Broadcasting,* August 24, 1981, p. 44. A report on the annual convention of the National Federation of Community Broadcasters.

Satellites

Spotlight on Telecommunications User's Groups, by Tom Weardon, *Telematics,* July 1981, pp. 33-36.

In this article, two users' groups are described and their roles outlined. The United Kingdom Telecommunications Managers Association (TMA) and the International Press Telecommunications Council (IPTC) both have an acute interest in the costs and efficiency of telecommunication services delivered by satellite.

TMA, the first group of its kind in Europe, has 350 members, most of whom are British or work for British-owned companies. Many of them have achieved important results for their companies simply by knowing the right person to talk to in another country when setting up an international communications link. TMA members are also concerned with making new technology available to users, including bringing satellite communications into the marketplace. Another area of action includes helping users and potential users identify their needs.

IPTC is more specialized since its members are mainly concerned with publication and dissemination of news. For example, a news agency may have over 600 outlets, all of which have to receive the same news simultaneously. IPTC would like to see "receive only" stations made available in Europe, but is hindered by political and economic factors as well as industrial monopolies. Its aim is "to get the political, social, and economic implications of telecommunications recognized on a higher level than they are today."

Cocks, Jay, et al. **"Earth Stations: Sky in the Pie."** *Time,* September 7, 1981, p. 70. A look at the market and uses for satellite earth stations.

Glatzer, Hal. **"Canadian Pirates Hook a Dishful of Stars and Stripes."** *Satellite Communications,* July 1981, pp. 32-34. A report on the Canadian debate on domestic communications and the "open skies" policy.

Glazer, Sarah. **"Satellite Communica-**

tions: Are These Services in the Cards for Your Company?" *Telematics,* July 1981, pp. 11-25. A guide to satellite services for businesses, and a list of firms.

Hill, Arthur. **"Primer: What Deregulation Means to the Satellite Communications User."** *Satellite Communications,* August 1981, pp. 22-23. A review of several major obstacles to the passage of the Telecommunications Competition and Deregulation Act of 1981, and its implications for satellite users.

"Keeping Up With the Satellite Universe." *Broadcasting,* August 17, 1981, p. 32. An overview of present and planned satellite audio, video, and teletext services including a chart of present services available on Satcom I, Comstar I and II, and Westar I and II.

Manning, Mary Jo. **"Satellite Transponder Sales: Clever Innovation or Illegal Ruse?"** *Satellite Communications,* August 1981, pp. 34-40. An analysis of satellite regulatory policy as it pertains to the resolution of the unregulated transponder sales issue.

"No Dearth of Dishes." *Broadcasting,* August 10, 1981, pp. 64-65. A report on commercial and noncommercial television stations owning earth stations.

Waz, Joe. **"Coming to Grips with DBS."** *Access,* September 7, 1981, pp. 1-2. A call for consumer representation in the development of direct broadcast satellite policy.

Teleconferencing

Thomas, Willard and Cinda Thomas. **"Estimating a Teleconferencing Budget."** *E & ITV,* August 1981, pp. 54-55. A review of the basic costs in producing teleconferences.

Bradford, Kathryn, et al. **"Teleconferencing Applications."** *E&ITV,* July 1981, pp. 25-32. A profile of several companies involved in using teleconferencing, outlining budget considerations and techniques.

"Directory of Teleconference Producers/Consultants." *E&ITV,* July 1981, pp. 33-34. A guide to companies and individuals who provide teleconferencing services.

DeJackmo, Margaret. **"Video Conferencing: A Boom or a Bust?"** *Communications News,* September 1981, pp. 86-87. An analysis of the limitations involved in video conferencing.

Gold, Elliot. **"Guidelines to Successful Teleconferencing."** *Meetings and Conventions,* August 1981, pp. 42-46, 142. A description of the types of teleconferencing, and basic guidelines for selecting and using satellite services.

Wollman, Jane. **"Tune In to Teleconferences."** *Savvy,* September 1981, pp. 16-20. A look at three types of teleconferences, techniques for communicating effectively, and costs of services.

Telephone

Telephone Conference Services, *The*

SOURCESCAN

Books, research papers, and occasional papers with information on how to obtain the publications.

A Decade of Telecourses, Coast Community College District, Office of Community Relations [1370 Adams Avenue, Costa Mesa, California 92626; 714/566-5898]. 1981. 29 pp.

A collection of articles by Coast Community College District administrators and telecourse specialists with information about needs ascertainment for telecourses, planning and designing of video programs by teams of collaborators, the development of the 30/30 standard course format, and course promotion and distribution. The booklet is available upon request.

Computing and Higher Education: An Accidental Revolution, by Robert Gillespie, ERIC Clearinghouse for Science, Mathematics and Environmental Education [Ohio State University, 1200 Chambers Road, 3rd Floor, Columbus, OH 43212]. 1981. 42 pp. $1.50 plus postage.

An overview of the potential of computing for integrating the traditional role of higher education into the new "information society," and linking the interests of education, industry, and government to improve national productivity. Also included are a consensus statement of issues and recommendations for national action developed by a panel of educators and industrialists; a review of previous research in the field; a look at how computing is affecting higher education; and an analysis of limits to growth in this area.

Educational Uses of Cable Television: A Marketing Study of Dallas, Texas, by Joe L. Welch and Jeffrey N. Savitz. Available from The Association for Higher Education of North Texas [PO Box 688, Richardson, TX 75080]. 64 pp. $5.00.

A recent study of the potential market for higher education delivered by cable television surveys a sampling of Dallas residents on their attitudes toward and appetite for higher education. The study showed a significant change in respondents' intentions to take educational courses at the mention of delivering courses by cable. Eighty-three percent of the respondents agreed high quality education could be offered by cable. Sixty-two percent indicated they would be more likely to subscribe to cable if it offered educational opportunities.

Implementing Interactive Telecommunications Services, by Martin C.J. Elton and John Carey. Alternate Media Center, New York University [725 Broadway, 4th Floor, New York, NY 10003]. 1981. 99 pp. Free.

An examination of a number of problems resulting from the implementation of field trials and demonstration projects based on interactive and telecommunications systems. The report is intended primarily for practitioners in this area, secondarily for policy makers and researchers with an interest in implementation problems. Findings from 45 U.S.-based past projects present an overview of factors which were essential to the success of various projects. An annotated glossary is included.

Interaction of Media, Cognition and Learning, by Gavriel Salomon. Jossey-Bass Inc. [433 California Street, San Francisco, CA 94104]. 1979. 282 pp. $16.95.

Aimed at both media theorists and designers of instructional materials, this book addresses the need to reevaluate research on media in education. The author suggests a shift from a theoretical and unsystematic exploration to one that examines the learner's capacity for processing information in relation to the medium's particular way of conveying content through symbols.

Linking Californians for Learning: Next Steps for Telecommunications in California Postsecondary Education, California Postsecondary Education Commission [1020 Twelfth Street, Sacramento, CA 95814]. 1981. 94 pp. Free.

An inventory of California's resources for telecommunications that can be used for learning beyond high school. This report discusses combinations of electronic media that can meet public

TeleSpan Newsletter, July 15, 1981, pp. 2-6. A summary of a teleconference between a representative of the Darome Connection and the Kellogg Telecommunications Corporation, this article offers insight into the operation of teleconference services.

A telephone conferencing service provides interconnection of two or more locations via dial-up telephone lines. It can provide four categories of service: functional, supportive, technical, and programming. So far, customers have reacted favorably to the quality of sound, speed of interconnection, and flexibility of meetings. Security issues (since an operator is on the line at all times) have been resolved by the signing of non-disclosure agreements. Customer dissatisfaction has come most often with the voice switching or voice activation of telephone conference services.

Issues that need to be considered in the design of a teleconference are: size—the optimal number of sites or participants involved; and traffic—the volume and pattern of use of transmission lines. Each of these potential problem areas needs to be resolved ahead of time.

Reasons for using a telephone conference service include: effective communication, higher quality than telephone company conference calls, speed and flexibility, and operator assistance.

Coexeter, Barbara. **"Tele-College for the Homebound."** *Community and Junior College Journal*, September 1981, pp. 39-40. A report on a New Jersey community college program that enables homebound students to participate in the college experience via telephone.

Copy Delivery Systems

How the VCR Boom Could Stall Innovation, *Business Week*, July 20, 1981, pp. 185-192.

New Japanese videocassette recorders (VCR), in ultra-compact designs, could change the competitive composition of this industry. The new portable units are expected to usher in the demise of the 8-mm film camera market, and could also wipe out the current VCR product lines by the mid-1980's. As a result, most VCR makers want to delay as long as possible the marketing of the new generation of machines. However, they also worry about lagging behind their competition in this new technology.

Recently Sony, Hitachi, and Matsushita all took the unusual step of unveiling—years in advance of production—proposed models that combine for the first time a video camera and a cassette recorder into a single, lightweight, compact unit. Their announced purpose was to arrive at a standard before production and marketing. All of the new "camera-corders" are designed to use tiny cassettes with ¼-inch tape, and none are compatible with existing ½-inch systems.

The problem is whether the ¼-inch VCRs should be pushed now, or wheth-

educational needs, and barriers that hinder use of these resources. Recommendations for improving utilization throughout the state are set forth.

"Mediated Instruction." In *The Modern American College*, by F. Keppel and A. Chickering (ed.). Jossey-Bass Inc. [433 California Street, San Francisco, CA 94104]. 1981. 16 pp. $35.

A debate on the issue of whether various forms of mediated instruction can contribute significantly to life cycle developmental tasks and adult development in general. This chapter discusses technologies as vehicles for reporting knowledge, communicating concepts, and achieving training outcomes.

Private Television Communications: Into The Eighties, by Judith and Douglas M. Brush. International Television Association [136 Sherman Avenue, Berkeley Heights, NJ 07922]. 1981. 202 pp. $39.95.

Third in a series of reports on non-broadcast television, this book focuses on the rapid growth of the use of "private television" in corporations and institutions. This study reveals that more than 3,000 organizations now produce 18,000 hours of video programming for viewing by employees, clients, shareholders, and other special audiences. New communications technologies, such as videodiscs and satellites, are reported on with a view toward their potential impact on organizational communications.

Solving College and University Problems Through Technology, edited by Donna Davis Mebane. EDUCOM [PO Box 364, Princeton, NJ 08540]. 1981. 504 pp. $15.

A compilation of 43 articles from EDUCOM's 1980 Annual Conference that provides a comprehensive update on the status of educational uses of technology. The book suggests that educators must use all available tools to solve today's educational problems and offers information technology as one such tool. Suggestions are included for creative uses of technology in the administrative, academic, and library areas of higher education.

Technology and Education: Policy, Implementation, Evaluation, Institute for Educational Leadership, Inc. [1001 Connecticut Avenue NW, Washington, DC 20036]. 1981. 317 pp. $20.

A compilation of the proceedings of the National Conference on Technology and Education held January 26-28, 1981. Fifty-five papers address a range of educational issues including accreditation and technology, faculty responses to the use of technology, courseware production, and application of technology for education of the handicapped.

Telecommunications and Productivity, edited by Mitchell L. Moss. Addison-Wesley Publishing Co., Advanced Book Program [Reading, MA 01867]. 1981. 376 pp. $37.50.

An examination of the potential of new telecommunications technologies for productivity in business and government. This book is based upon an international conference on telecommunications and productivity sponsored by New York University's Center for Science and Technology Policy. It features authors from both public and private sectors and their analyses of policy making issues, the work environment, public uses of telecommunications systems, and emerging policy directions.

TeleGuide: A Handbook for Video-Teleconference Planners, National Satellite Network and Media Services. Publishers Services, Inc. [621 Duke Street, Alexandria, VA 22314. Also available from the Public Service Satellite Consortium, 1660 L Street NW, Suite 907, Washington, DC 20036]. 1981. 92 pp. $34.50 before January 1, 1982.

A guide to the fundamentals of video teleconference planning and execution.

Television and Social Behavior: Beyond Violence and Children, edited by Stephen B. Withey and Ronald P. Abeles. Lawrence Erlbaum Associates Inc. [365 Broadway, Hillsdale, NJ 07642]. 356 pp. $24.95.

A useful summary of the state of the art in television. This volume began as a report of the Committee on Television and Social Behavior to the Social Science Research Council. Included are proposals on how to improve inquiries into the learning effects of television.

The Low Power Television Guidebook: A Primer on the Low Power Service, Corporation for Public Broadcasting, Office of Telecommunications [1111 16th Street NW, Washington, DC 20036]. 1981. 43 pp. Free.

A guide for those interested in applying for a low power television station. This booklet covers the legal, technical, and operating aspects of LPTV. It also addresses basic issues of cost, station coverage, and application procedures. Appendices include resource references and sample application forms.

er the booming ½-inch market should be saturated first. Besides the standardization problem, the industry must also solve the cost problem and reduce the retail price substantially below the planned introduction prices in order to compete in a mass market.

In the meantime, the 8-mm market is being eroded. It is assumed that the video camera-corder will eventually replace the whole 8-mm movie camera industry. For now, concern focuses on how the new ¼-inch design will affect the ½-inch VCR business.

"Audiodiscs Using Videodisc Technology to be Available Next Year." *The Videocassette and CATV Newsletter*, July 1981, pp. 158-159. A report on a new electronic product, the digital audiodisc system.

Caranicas, Peter. **"Treasures on Videodisc."** *Saturday Review*, July 1981, p. 83. A review of two videodisc systems and their program offerings.

"Videodisc Probed As Possible TV Broadcast Distribution Medium." *Television/Radio Age*, August 24, 1981, pp. 45-47. An examination of continuing improvements in videodisc technology and interest in the potential use of that technology as a distribution medium.

Winslow, Ken. **"The Minnesota Public Library Home Video Circuit."** *The Videoplay Report*, July 20, 1981, pp. 1-4. An overview of a public library system that offers various kinds of video program activities, which are purchased and circulated on a cooperative basis.

Interactive Video

"Interactive Fights to Dismiss 'Big Brother' Label." *CableAge*, August 10, 1981, pp. 28-32. A review of studies and research results on the public's suspicions and fears regarding the new interactive television technologies.

Periodicals omitted from our previous review list follow below. These also will be monitored on a regular basis for articles dealing with higher education and the new technologies.

AAHE Bulletin
American Association for Higher Education

CASE Currents
Council for the Advancement and Support of Education

CableAge
Television Editorial Corporation

Journal of Higher Education
Ohio State University

Time
Time Inc.

Errata—the publisher of Community Television Review *is the National Federation of Local Cable Programmers; not University Community Video as listed in our last issue.*

MACROSCAN

Programs, projects, conferences, workshops, other events, and funding sources.

Videotext Tests Underway

Here is a brief overview of several major videotext experiments now underway in the U.S. and Canada.

- WETA-TV, a PBS-affiliated station in Washington, DC, is working with the Alternate Media Center at New York University to conduct a field trial of teletext. With funding from the Corporation for Public Broadcasting, the National Science Foundation, the National Telecommunications and Information Administration, and the U.S. Department of Education, teletext decoders will be provided to 40 private homes and will be placed in 10 public locations. By means of a meter attached to the decoders, the Alternate Media Center will gather various data on what kinds of information are most often called for.
- In Canada, TVOntario has been involved in the testing of education applications of videotext for over two years using the Telidon system. TVOntario's experience points to the use of Telidon in an educational environment in three modes: on-line, broadcasts of information (off-air, cable, or satellite transmission), and local storage of educational sequences.
- On April 8, 1981, KCET-TV (public televison) and KNXT (CBS-owned station) in Los Angeles began the first public demonstration of teletext in the U.S., entitled the "Now" project. Using more than 10 public locations, the project offers a range of informational services such as news, cultural events, emergency medical information, television listings, and interactive instructional exercises.
- Time Inc. plans a major test of teletext by cable, delivering the information to the cable system via satellite. Planned for sometime late in 1981, the locale will be Time's CATV system in San Diego. A full satellite transponder will be used to "send out some 4-5,000 pages of news and information" to be transmitted over a number of cable channels.
- The Online Computer Library Center, Inc. (OCLC), a national data center in Dublin, Ohio, is sponsoring a viewdata project entitled "Channel 2000." Two hundred households were selected for the test. Several services are offered, among them a number of educational services.
- In Chicago, WFLD-TV, a commercial UHF station, has a small (60 receivers) experiment underway. It uses the British teletext system called "Ceefax," but the American version is to be called "Context."

UMA Moves Toward American Open University

Building on nearly a decade of experience in designing instructional college programs for off-campus adults, the University of Mid-America (UMA) is now creating an American Open University (AOU) that will offer high quality degree programs to adults who may be able to study only on a part-time basis.

The AOU will be an accredited, degree-granting institution, delivering instruction through technology and serving adults wherever they are located. The Open University will offer a range of services not now available systematically in higher education institutions across the country.

Degree programs will include transfer credit from other institutions, proficiency tests, and approved training programs for business and government, as well as the AOU's own technology-based instruction.

The Open University will use existing communications media—such as broadcast and cable television, computers, telephones, and radio—in addition to such emerging technologies as videodiscs and satellites which enable adults to earn degrees with minimal interruption of their work and family lives.

The University of Mid-America is a private, not-for-profit corporation founded in 1974 with funding from the National Institute of Education, private foundations, and corporations. A staff of about 60 is engaged in producing multimedia instructional materials for colleges and universities nationally, conducting research into adult learning, and planning the American Open University at UMA headquarters in Lincoln, Nebraska. Contact Milan Wall, Vice President, UMA, PO Box 82006, Lincoln, NE 68501, for further information.

CTIC Surveys Cable TV Community Programming

The Cable Television Information Center (CTIC), a nonprofit organization dedicated to providing objective information to local governments about cable television, is currently researching

the uses of local cable channels for community programming.

The Center has designed a survey questionnaire to solicit specific information about programming, budgets, and operations of local organizations using cable access channels and local origination channels. The questionnaire is intended to reach users of education, municipal, public, and leased access channels as well as local origination channels.

The results of the survey will be published in a cable television user's directory, to be made available from CTIC in 1982. The Center expects the directory to contain information on over 200 cable television user groups who are currently involved in community programming. Anyone wishing to be included in the directory, or knowing of someone who should receive the survey instrument, may contact Nancy Jesuale, The Cable Television Information Center, 2100 M Street NW, Washington, DC 20037; 202/872-8888.

NFLCP Workshops Train Access Coordinators

The rapid expansion of cable services, tied with an increasing interest in and emphasis on community access programming in large urban areas, has led to an increased demand for qualified coordinators. At the same time, that job has become more complex with the development of new technologies for interactive programming, institutional networks, and community services. As a result, there is a need to provide a common base of reference and experience for those entering the area of community access coordination.

To meet this new demand for qualified personnel, the National Federation of Local Cable Programmers (NFLCP) has initiated a training program for community access coordinators.

The six-week NFLCP training program will integrate classroom instruction with on-site internships. The workshop will be followed by sessions on:

- Administrative and management skills;
- Community outreach techniques;
- Access production training;
- Criteria for equipment selection and purchase;
- Operating rules and procedures;
- Problem solving;
- Ascertainment studies and needs assessments;
- Institutional programming development.

Participants will then move on to a four and one-half week internship at a community programming center. They will regroup at the end of the on-site internship for a three-day discussion and evaluation of their experiences.

A community programming operations manual will supplement the training and provide fundamental information on the effective operation of a community programming facility. The manual will feature models and case histories of successful community programming operations, including strategies for ascertaining community needs and identifying existing resources.

The training program is an ongoing project of the NFLCP with sessions planned throughout 1982. Individuals interested in enrolling in the program, as well as community programming centers interested in being host sites for interns, should contact Sue Buske or Joan Gudgel at NFLCP, 906 Pennsylvania Avenue SE, Washington, DC 20003.

NRTA/AARP Conducts Technology Survey

The Institute of Lifetime Learning, along with the continuing education department of the National Retired Teachers' Association, and the American Association of Retired Persons, completed in June 1981 a national survey of middle-aged and older adults on their use of, and attitudes towards, various technologies. The survey sample comprised 750 men and women who were questioned about television, radio, cable TV, computers, electronic banking, and home security systems.

Results revealed that younger adults in the sample, as well as those with higher income and education levels, were more likely to view technology in a positive light. They were also more likely to actually have used these technologies. The study suggests that the use of telecommunications for education will be accepted most readily by those who have achieved high levels of education already.

Further information on the survey can be obtained by writing to Kathleen Chelvig, Institute for Lifetime Learning, NRTA-AARP, 1909 K Street NW, Washington, DC 20049.

Endowment Funds Humanities Projects in Media

The Media Program of the National Endowment for the Humanities (NEH) supports planning, scriptwriting, or production of innovative television, radio, and cable projects to reach national or broad regional adult audiences. The program is solely interested in proposals that use research and information developed in the humanities, focus on subjects and issues central to the humanities, and stimulate understanding about the diversity of American culture. Collaboration between production staff and individuals with substantive knowledge of the subject area is a particularly important element of funded proposals.

While the program has already supported a variety of original, single projects and series, NEH expects new proposals to move beyond what has already been done and build on some of the new research in the humanities.

The next deadline for submission of proposals is December 7, 1981. For further information contact the Media Program Office, National Endowment for the Humanities, 806, 15th Street, NW, Washington, DC 20506; 202/724-0318.

FIPSE Deadline—Dec. 1, 1981

The Department of Education's Fund for the Improvement of Postsecondary Education (FIPSE) supports a variety of programs designed to improve the quality of education beyond high school. Included in the Fund's special interest areas are educational applications of the range of telecommunications technologies to enhance teaching and learning.

The deadline for preliminary proposals under this year's Comprehensive Program is *December 1, 1981*. A complete list of 1981-82 FIPSE programs in the area of telecommunications will appear in the next issue of *TELESCAN*.

For further information, contact Fund for the Improvement of Postsecondary Education, U.S. Department of Education, 7th and D Streets SW, Washington, DC 20202-3320; 202/245-8091.

CLEO Initiates Analysis of Cable Demand

Founded in 1976, the Compact for Lifelong Educational Opportunities (CLEO) is a regional adult education consortium of 48 colleges and universities in the five county Philadelphia community. In collaboration with the local public television station, CLEO has developed a process for schools, health and other human service agencies, libraries, cultural institutions, and businesses to identify the public and economic uses of cable television.

This initiative builds on the opportunity for higher education and other human, community, and cultural service institutions to play a useful role in leading the organization of service delivery systems for cable channels. Currently, an analysis of demand is the responsibility of no governmental agency. Specification of such demand is intended to have a direct effect on cable franchise negotiations and is seen as a high priority in coming years when the supply of cable channels may exceed commercial uses.

For further information, contact Herman Niebuhr, Temple University, Philadelphia, PA 19122; 215/787-7777.

Comments from Readers

Congratulations on Volume 1 of *TELESCAN*. The format is very readable and you have packed a lot into a few pages.

—Martha G. Butt
Northwest Area Foundation

Just a quick note to let you know that *TELESCAN* is super! We'll definitely be subscribing.

—Nancy Dunn
University of Massachusetts

TELESCAN #1 is beautiful! Sophisticated in design, well-formatted, full of good info, just enough but not too much about any one item. Hooray for you.

—Penny Richardson
University of Southern California

I have just seen a copy of *TELESCAN*. I found it to be a highly readable and informative publication.

—Donald P. Ely
ERIC Clearinghouse on Information Resources, Syracuse University

What a serviceable, handsome, well-done premier issue of *TELESCAN*. Congratulations. You are off to a fine start in making a unique and needed contribution to the field.

—Ronald Gross
Independent Scholarship, The College Board

Contributors

Contributors to this issue of TELESCAN are listed below. The efforts of these individuals have been critical to our monitoring activities. ***We urge those of you who wish to become part of this important information network to submit to TELESCAN items of potential interest to our broadly based audience.***

Sue Buske
National Federation of Local Cable Programmers

Kathleen Chelsvig
American Association of Retired Persons/ National Retired Teachers' Association

Peter Dirr
Corporation for Public Broadcasting

Carol Brown Eilber
National Federation of Local Cable Programmers

Rusty Garth
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TELESCAN

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The Digest of the Center for Learning and Telecommunications VOLUME 1 ISSUE 3

New Publication Available from Center in 1982

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Resources for television, radio, video, and satellite instruction ..... page 8

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Meeting Learners' Needs Through Telecommunications: A Directory of Programs *by Raymond J. Lewis*

One of the obstacles to improving or expanding the use of telecommunications to reach postsecondary learners has been the lack of accurate, detailed, current, and comparable information about programs that currently use these technologies. The forthcoming directory, to be published by the Center for Learning and Telecommunications, seeks to fill this longstanding void.

In Fall 1982, the Center will make available this directory of 70 educational delivery systems throughout the United States that use telecommunications technologies to serve postsecondary learners. The directory will include detailed narrative information in 16 categories that include educational mission, technologies used, curriculum, faculty roles, delivery system, enrollment, finances, noteworthy aspects, future plans, resources available to others, and contact person.

The directory focuses on instructional delivery systems that have a capacity to serve learners off-campus as well as on-campus. A full range of undergraduate liberal arts, vocational/technical, graduate, and professional continuing education programs are included among the 70 programs.

The 70 programs described in the directory use many variations of five basic types of technologies: television, radio/audio, telephone, computers, and copy (audio- and videotapes). Some variations of these technologies include interactive, cable, satellite, ITFS, and slow scan television; audio and video teleconferencing; dial access phone systems; and the electronic blackboard. The programs are:

Two-Year Colleges

Central Piedmont Community College
Chicago City-Wide College
Coastline Community College
College of San Mateo
Columbus Technical Institute
Dallas County Community College District
Kirkwood Community College
Los Angeles Community College District
Miami-Dade Community College
Milwaukee Area Technical College
Northern Virginia Community College
Queensborough Community College
Rio Salada Community College
Tacoma Community College

Four-Year Colleges and Universities

California State University, Chico
Central Missouri State University
College of Great Falls
Colorado State University
Eastern Oregon State College
Emory University School of Medicine
Michigan State University (Rockford Cable Project)
New York University
North Carolina State University, School of Textiles
Pennsylvania State University
San Diego State University
St. Augustine's College
Stanford University
Trinity University
University of Illinois—Computer-Based Education Research Laboratory
University of Illinois—Engineering Continuing Education
University of Maryland
University of Minnesota
University of Nebraska
University of Nevada
University of South Carolina/ETV Commission
University of South Florida
University of Washington
University of Wisconsin—Extension
Wayne State University
West Virginia College of Graduate Studies
West Virginia Wesleyan College

Consortia

Association for Higher Education of North Texas (TAGER)
Bay Area Community College Television Consortium
CABLE—Spokane
Eastern Educational Consortium
Indiana Higher Education Telecommunication System (IHETS)
Kentucky Council on Higher Education Telecommunications Consortium
Maryland College of the Air
National University Consortium (NUC)
Philadelphia Community College—Community College at Home Project
San Diego and Imperial Counties Community College Association
Southern California Consortium for Community College Television
To Educate the People Consortium (TETP)
University of Mid-America
Washington State Community College Consortium

Broadcast and Cable Facilities

Educational Television Center of the Archdiocese of San Francisco
WNET/Channel 13, New York City
WYES/Channel 12, New Orleans
Public Broadcasting Service/PTV-3

Community-based Organizations

Berks Community Television

Governmental Agencies

Baltimore Mayor's Office of Manpower Resources
Kansas Regents Continuing Education Network
Wisconsin Vocational, Technical, and Adult Education System

Professional Associations

American Bar Association
American Dietetic Association

Nonprofit and For-Profit Organizations

American Educational Television Network
Appalachian Community Service Network
Association for Continuing Education (ACE)
Association for Media-Based Continuing Education for Engineers, Inc. (AMCEE)
Rand Corporation and TeleCable of Spartanburg
Medical Care Development, Inc. (CMITS)

contd, p. 5

The Center is a program of the American Association for Higher Education One Dupont Circle Washington, DC

CAPITOLSCAN

Washington-based, national initiatives involving uses of telecommunications in higher education.

227 Proposals Request Nearly $143 Million In First Round Of CPB/Annenberg Project

The Corporation for Public Broadcasting/Annenberg School of Communications (CPB/ASC) Project received 227 proposals on Nov. 2, 1981, requesting nearly $143 million to develop college course materials. Approximately $5 million is available for first round funding.

A preliminary analysis by the project staff indicated that there were about three television proposals to every one for radio and other media.

After the elimination of those proposals that did not meet technical specifications as outlined in the project guidelines, each of the remaining proposals were reviewed by three external reviewers. Proposals with high marks from the first evaluation have been submitted to a panel for a second evaluation.

The project director will forward panel recommendations to the CPB/ASC Council, which has elected its two public members, John B. Slaughter of the National Science Foundation, and Gladys C. Hardy, formerly with the National Institute of Education.

The council meets February 3, 1982, to make final funding decisions on this first round. The deadline for the submission of the second round of proposals is April 5, 1982.

Public Broadcasting Plans Narrowcast Network

In response to demands for adult education delivered to targeted audiences, PBS is planning a national narrowcast network.

Using its satellite distribution system to connect public television stations, and the Instructional Television Fixed Service (ITFS) frequencies to connect stations, colleges, and other public and commercial enterprises locally, PBS will offer a variety of educational programming. ITFS is a short range, multiple point distribution technology that allows an unlimited number of institutions in a given area to receive the signal. However, only institutions equipped with a special antenna can receive the transmission.

Presently, 28 ITFS frequencies are reserved for education in each community. However, they are underutilized and the FCC is under strong pressure to reassign them for commercial use. To save these frequencies for education and to develop additional means of serving education through technology, PBS is applying to the FCC on behalf of its member stations for four ITFS frequencies in each of the more than 200 communities where public television stations exist.

In its dialogues with many educational associations, professional and trade organizations, labor unions, and postsecondary institutions, PBS has learned of the vast need for educational programming on the job, in classrooms, as a library resource, and for targeted audiences that cannot be fulfilled through open broadcast distribution. The national narrowcast network will be able to serve these additional educational, professional development, and career training audiences.

Further, the network will help national and regional associations to continue activities usually carried out through meetings and publications but which may not be economically feasible for the future.

College Consortium, ACSN To Develop Telecourse

The Appalachian Community Service Network and the Consortium of Universities of the Washington Metropolitan Area have entered into an agreement to seek funds for the development and production of a telecourse.

Under the agreement, ACSN and the consortium jointly will select the telecourse topic and seek funds for production. A national educational network that reaches nearly 1.2 million households via cable, ACSN will handle the TV production and telecourse utilization, as well as provide the expertise in satellite distribution and cable technology. The consortium will be responsible for course design and all other related issues.

The consortium consists of the American University, Catholic University of America, George Washington University, Georgetown University, Howard University, the University of the District of Columbia, and Gallaudet, Mt. Vernon, and Trinity Colleges. Formed in 1966 as a nonprofit corporation, the consortium extends the resources of all nine institutions through student exchange, joint academic and financial planning, and resource sharing. The individual member institutions are among the most respected academic institutions in the country, and together they represent a diversity of interests and points of view.

ACSN, which began in the early 1970's as an experiment using telecommunications to deliver higher education to isolated regions, today is an independent nonprofit adult education network. Over 200 cable systems in 39 states currently subscribe to the service.

In seeking to provide educational opportunity to adults wherever they live, ACSN continues to emphasize its long-time commitment to serve the "non-traditional student"—the homebound mother, the new high school graduate who cannot afford an on-campus education, the full-time worker who lacks ready access to college-level courses, and all others whose ability to pursue higher education is limited by financial or similar concerns.

Satellites Serve Higher Education's Interests

A growing number of institutions of higher education are expressing interest in satellite communications and the multiple benefits they can bring, according to Elizabeth Young, president of the Public Service Satellite Consortium (PSSC). Founded in 1975, PSSC assists public service organizations in delivering their services through the use of communications technologies, in participating in national and international forums, and in influencing the development of satellite technology.

Thirty-four of PSSC's members (out of a total of 106) are institutions of higher education or organizations representing higher education (such as the American Association for Higher Education). Young noted that "about half" of the new members joining PSSC in the past several months have come from the higher education field.

While the work for each institution differs, there are several common interests emerging at institutions: They want to determine how courseware can be received and delivered via technology, they are interested in opportunities to interconnect with other institutions and networks, and they recognize the community service potential of having satellite facilities on campus.

In addition to courseware exchange, universities and colleges can utilize communication satellites for administrative purposes (interconnecting with branch campuses and sister institutions), for teleconferencing (both for university business and on behalf of local organizations and businesses), and for distribution and reception of sports and entertainment programming. While costs of maintaining and improving physical plants for universities are rising, innovation with communications technology can drive costs down and add valuable services.

Other PSSC activities include:

- A survey of 86 libraries in more than

20 states, profiling those that are connected to local cable systems having satellite access. Major uses of this network were identified as live, interactive, or taped continuing education; dissemination of organizational information; and public interest programming.

• The National Satellite Network (NSN), which is PSSC's teleconferencing service for the coordination and management of video teleconferences with two-way audio interaction. Through NSN, PSSC arranges for satellite time, coordinates all terrestial system facilities, trains site facilitators, arranges for production services, handles uplinking of signals, and arranges financial details.

• A report compiling the evaluations and reports from experimenters in the joint U.S.-Canadian Communications Technology Satellite (CTS) or "Hermes." The report summarizes major findings of 20 experiments conducted in areas of health care, education, medicine, and business. More than half of the U.S. experimenters have gone on to become regular users of commercially owned domestic satellites, achieving an important CTS objective—technology transfer. PSSC was an approved experimenter on CTS, and conducted 55 experimental transmissions on the satellite.

Adult Learning Service Announces New Programs; Undertakes Survey on Use Of Television Courses

Removing one of the major barriers to utilization of television courses by colleges—inadequate lead time—PBS/PTV-3 announced its fall 1982 Adult Learning Schedule at a national teleconference on November 18. An unprecedented nine months lead time allows colleges greater opportunity to obtain the necessary academic approvals to offer the courses, to select faculty, and to establish student support services appropriate for adult learners. Colleges and stations will also have more time to evaluate the options for their local broadcast schedules and to plan and implement effective promotion and recruitment campaigns. The core of the spring 1983 Adult Learning Schedule was also announced at the teleconference, thereby providing over 12 months lead time for those courses.

The fall 1982 schedule is comprised of eight telecourses selected from among the 35 presented during PTV-3's first national screening conducted in mid-October. The courses cover a range of academic subjects that can be easily integrated into a college curriculum. Many can be used both as credit-bearing courses and for continuing education. The television courses may be adapted to local education needs, but are academi-

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LEGISLATIVE REVIEW

Reports on issues affecting higher education's use of telecommunications for instruction.

State Licensure of Instructional Telecommunications: An Overview of a Constitutional Problem

by Michael B. Goldstein

(This article was adapted from remarks presented at a Workshop on Planning and Evaluating Educational Telecommunications Issues held in conjunction with the 1981 Annual Conference of the National Association of Educational Broadcasters.)

As the use of telecommunications for the delivery of higher education services becomes more widespread, a fundamental conflict is developing between the traditional rights of the states to regulate the delivery of educational services within their boundaries, and the concept of telecommunications as constituting both protected free speech and interstate commerce immune from state interference. The obligation of the states to protect the interests of their citizens as consumers of educational services is also perceived by some to be a desire on the part of traditional institutions to protect themselves from the competition created by these new technologies.

Supporters of both state sovereignty and federal preemption can turn to the Constitution for support of their positions. Article I, Section 8, of the Constitution, the Commerce Clause, provides that "The Congress shall have power . . . to regulate commerce with foreign nations and among the several states . . ." The corollary to the Commerce Clause is the doctrine that no state may impose an unreasonable burden upon interstate commerce.

The Tenth Amendment to the Constitution, the Reserved Powers Clause, both adds to and subtracts from the perceived federal role: "The powers not delegated to the United States nor prohibited by the Constitution to the States, are reserved to the States respectively, to the People." The implications of this brief provision are several. On the one hand, if a power (like control over interstate commerce) is delegated to the federal government, the states are preempted from its exercise. On the other hand, powers *not* delegated to the central government are retained by the states. Perhaps most venerable among the powers viewed as reserved to the states has been the control of education, and it has become standard for federal laws relating to education to include a reference to the primacy of the states: "No provision of any applicable program shall be construed to authorize any department, agency, officer or employee of the United States to exercise any direction, supervision, or control over the curriculum, program of instruction, administration, or personnel of any educational institution . . ." (General Education Provisions Act, §432, 20 U.S.C. §1232a).

The states have asserted this control through statutory schemes regulating the delivery of educational services within their boundaries. In most, albeit not all states, providers of postsecondary educational services, particularly if leading to a recognized degree or if using the term "college" or "university," must obtain permission to operate from an appropriate state agency. While the requirements for such licensure vary widely from state to state, the common thread is a demonstration, to the satisfaction of the state licensing agency, that the provider is qualified to offer instruction to the citizens of the state. (To be sure, some states are far more easily satisfied than others.) In theory at least, offering postsecondary instruction to the citizens of a state should subject the provider to state licensure, regardless of the medium of dissemination.

If the inherent conflict between federal and state primacy were not enough, there is a third theory which argues that the proper answer to the question of who controls should be "none of the above." Relying on the First Amendment and its protection of freedom of speech, and on the Fourteenth Amendment requiring the states to afford "equal protection of the laws," some providers of interstate instructional services have argued that *neither* the federal government nor the states can impose limitations upon the intellectual discourse that constitutes postsecondary educational services. A few providers have further argued that the sole purpose of state regulation is to protect the status quo within the state, thus unreasonably burdening interstate commerce, while at the same time suggesting that the federal government has no right to involve itself in so local a matter as postsecondary education. contd, p. 4

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cally credible as they now stand. The screening gave colleges and stations the chance to have formal input into the selection of programming for the 1982-83 academic year schedules. The national screening is only one of several new developments undertaken by PTV-3 to improve and expand services to its users.

Another activity of the PTV-3 Adult Learning Service is a national study on the use of instructional television for adult learners. The study will gather information on student and faculty perceptions about televised instruction, the ways PTV-3 distributed courses are being used locally, how well the PTV-3 service is serving colleges and stations, and in what ways it might be improved. A separate survey has been developed for each of four target audiences: the adult learning liaisons at public television stations, telecourse administrators at colleges, faculty for PTV-3 distributed television courses, and students enrolled in those courses. Responses to the surveys are expected at the end of the fall academic term. Information gathered in this survey will be reported to readers of *TELESCAN*.

FIPSE Funded Projects in Telecommunications

Funded in the 1981-82 Comprehensive Program of the Fund for the Improvement of Postsecondary Education (FIPSE) are 26 projects related to innovative uses of telecommunications technologies for the improvement of educational practice. Among the technologies utilized in the projects are broadcast and cable television, closed-circuit teleconferencing, computer-assisted instruction, interactive television, radio, and videodisc. Institutions receiving FIPSE grants for these projects are:

University of Alaska, *Anchorage, Alaska*
Arizona State University, *Tempe, Arizona*
Brigham Young University, *Provo, Utah*
Atlanta University, *Atlanta, Georgia*
University of California at Santa Barbara, *Santa Barbara, California*
Cultural Education Collaborative, Inc., *Boston, Massachusetts*
Eastern Montana College, *Billings, Montana*
Foothill Community College District, *Los Altos, California*
Greater Washington Educational Telecommunications Association, Inc. (WETA-TV), *Washington, D.C.*
University of Iowa (CONDUIT), *Iowa City, Iowa*
Kirkwood Community College, *Cedar Rapids, Iowa*
Lutheran Social Mission Society, *Philadelphia, Pennsylvania*
National Public Radio, *Washington, D.C.*
University of Nebraska, College of Law, *Lincoln, Nebraska*
New Jersey Institute of Technology, *Newark, New Jersey*
University of New Mexico, *Albuquerque, New Mexico*
City University of New York, Lehman College, *Bronx, New York*
Puerto Rico Junior College, *Rio Piedras, Puerto Rico*
University of Puerto Rico, *Aguadilla, Puerto Rico*
University City Science Center, *Philadelphia, Pennsylvania*
WGBH Educational Foundation, *Boston, Massachusetts*

Additional information on each of the projects, including names and addresses of project directors, is in *Resources for Change*, available from FIPSE, 7th and D Streets SW, Washington, DC 20202-3320; 202/245-8091.

legislative review, contd from p. 3

When these concepts are applied to instructional telecommunications the nature of the conflict becomes more acute. That there is clear federal preemption of the medium of through-the-air telecommunications is unchallenged: Certainly no state can authorize any electronic broadcast absent appropriate federal licensure. But to what extent, if any, does that control extend to the *content* of the broadcast? Does the state have a *concurrent* interest in controlling that content? This raises the theory of *negative* preemption, through which federal legislation declines to assert federal jurisdiction but simultaneously proscribes state regulation, an approach proposed for the cable television industry. The effect of this would be to prohibit states and localities from enforcing franchise provisions that would require the carriage of certain types of programming.

The issue has been most clearly struck in a line of cases concerning what is termed "commercial speech," which in common parlance translates to advertising. The Supreme Court has held that a state *may* impose limitations on commercial speech where there is an overriding state interest, as in the case of preventing false or misleading advertising. But the Court has also held that state action cannot be used to constrain commercial speech when the purpose is not to protect the public but rather to insulate an industry from competition. Whether instructional telecommunications constitutes commercial speech is as yet unresolved, and must be considered in the context of the deference the courts have paid to the traditional powers of the state to regulate education.

The assertion of state jurisdiction must depend, of course, upon the *presence* of the provider within the boundaries of the state. When applied to instructional telecommunications, traditional concepts of presence fall by the wayside. The broadcast of a telecourse may blanket a state with an instructional offering, but the traditional measures of physical presence may be entirely lacking. The nature of the contact may require the dissection of the particular offering: Is instruction offered? To what extent does the sponsoring institution solicit or recruit students? What other contact, in the form of resource centers and the like, is or may be present? Is a degree granted, and if so, whose and where?

For telecommunications-based instructional programs, the answers to these questions may be extremely vague: To what extent does a broadcast signal constitute presence? Does a broadcast invitation to enroll constitute solicitation under state law? Does the provision of written materials or evaluations alter the concept of presence? A few statutes are written so as to bring any of these within the purview of state regulation, but whether they are consonant with the constitutional protections on interstate commerce and free speech remains unsettled. The states argue such laws are essential to protect their citizens from the depredations of operators whose instructional offerings are either outright fraudulent or not up to the minimal standards the state has required of those institutions operating within its boundaries. Others contend that these laws are protectionist, burden interstate commerce, and prevent the free flow of ideas.

The lack of uniformity among the states exacerbates this problem. The provider of instructional telecommunications services must either seek to analyze 50 state post-secondary licensure laws (plus those of the District of Columbia, Puerto Rico, and the possessions) or take the chance of committing an act that in some jurisdiction may constitute criminal conduct. The potential collision between the tradition of state control over education, the federal prohibition against the imposition of undue burdens upon interstate commerce, the protection of free speech, and the affording of equal protection of the laws cannot be long ignored as postsecondary education increasingly discovers telecommunications. The resolution of these problems should be a threshold concern of the states, the telecommunications industry, and the higher education community.

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For more information on the publication of this directory, please contact the Center for Learning and Telecommunications staff at One Dupont Circle, Suite 600, Washington, DC 20036; 202/293-6440.

NPR Increases Involvement In Higher Education

National Public Radio's Office of Educational Services continues to expand its involvement in the uses of radio to deliver instruction to adults. Recent NPR developments in this area include:

- A two-day seminar to acquaint administrators, faculty, and station personnel with the acquisition, production, and utilization of audio credit courses will be held in Washington, D.C. in April 1982. This Adult Learning Institute is the fourth in a series that began with an NPR/FIPSE grant and was reported in the September/October issue of *TELESCAN*. A fee will be charged for this seminar.
- A tripartite grant from the Exxon Education Foundation, the Corporation for Public Broadcasting, and FIPSE, in collaboration with the Foreign Policy Association and the University of Texas at Austin, to create two three-credit audio/print postsecondary courses in international studies.
- An Educational Satellite Service to accommodate the growing number of audio courses becoming available, in part, as a result of the Annenberg activity. NPR is exploring the possibility that some course material might be delivered via their Extended Program Service to NPR member stations in fall 1982.
- A subcontractor role for NPR in several Annenberg proposals, underscoring the diverse functions radio can serve in higher education—as the prime source of information, as a supplement and complement to print material, or as an important partner to the television experience.

For further information on these programs, contact Karen Kearns, assistant director, Education Services, NPR, 2025 M Street NW, Washington, DC 20036; 202/822-2674.

Dear Subscriber:

As you can see, *TELESCAN* is thriving. We've even had to expand this issue to accommodate the amount of information we felt you wanted to know about. As one of our readers noted recently, we are becoming "trail blazers" with this new and innovative monitoring service.

And, our subscriptions are continuing to pour in. Interestingly enough, we've attracted subscribers not only from the higher education community, but also from the diverse public and private organizations with a vested interest in the uses of telecomunications for the education of adults. Among these groups are television and radio station managers, cable companies, corporate executives, publishers, producers, trade associations, school districts, consulting firms, and federal, state, and local agencies.

Developing *TELESCAN* and watching it grow is both exciting and challenging. But our purpose continues to be making *TELESCAN* responsive to you, our readers. So, I'd like to take this opportunity to invite you to contribute items of interest (which many of you have done already), and to call or write us with your comments and suggestions on how *TELESCAN* can continue to meet your information needs.

Many thanks for your support—I look forward to hearing from you.

Marilyn Kressel
Director
Center for Learning and Telecommunications

In the next issue . . .

- Audio teleconferencing links Washington, Idaho, and Alaska with professional continuing education programs.
- Health professionals in South Carolina attend medical rounds through live interactive broadcast system.
- Corporation for Public Broadcasting study reviews research on the implications of new technologies for public broadcasting.
- Deadlines for preliminary proposals to the National Science Foundation's Ethics and Values in Science and Technology (EVIST) program.
- Resource materials on satellites, radio, cable television, videodisc, computer software, and viewdata.
- More than 65 entries in Printscan literature review.
- Legislative review on higher ed. and telecommunications issues.

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Comments from Readers

We would love to subscribe to *TELESCAN* . . . alas! . . . no money! This year the State Legislature has given us NO BUDGET, and our Federal Title II Grant has been reduced. Tell your Representatives and Senators about it. I have!

—Monette E. Redslob
Learning Resources Division
Aiken Technical College

I just received issue number two of *TELESCAN* and am now even more impressed than ever. I've passed it along to members of my staff who are interested in this area and will continue to talk about you wherever I go.

—Anne L. Bryant
National Association of Bank Women, Inc.

Thank you for the copy of your new *TELESCAN* publication. It's very impressive.

—Kathryn E. Johnson
The Association of Western Hospitals Educational & Research Foundation

TELESCAN is terrific. I am really quite proud to be on your masthead.

—Michael B. Goldstein
Dow, Lohnes & Albertson,

Thank you for *TELESCAN*. I certainly found it informative in the area of education telecommunications.

—Elyzabeth Joffe
Ohio University Telecommunications Center

PRINTSCAN

Abstracts and bibliographies of articles appearing in periodicals from September 15 through November 15, 1981.

Innovative Concepts

Evaluating the Use of Technology in Education, by Kamala Anandam and J. Terence Kelly, *Journal of Educational Technology Systems,* Vol. 10 (1981-82).

Evaluating the use of technology in education in the past has yielded conflicting results due to inadequate implementation of technology and premature attempts at evaluation. The necessary phases in using technology had been ignored. This article introduces the concept of the "three E's"—extensiveness, effectiveness, and endurance—as the phases in an innovation diffusion process. It is suggested that since faculty adaptation of an innovation is neither easy nor quick, evaluation in the area of technology and education should be examined differently, as with the three E's.

The premise is that one has to have extensiveness before one can measure effectiveness, and one has to establish effectiveness before the innovation will endure. The potential for endurance is evident when one recognizes the growing use of home TV, portable computers, home terminals hooked to large computers, videodiscs and personal computers, and electronic communication and information processing.

The major direction of new technology in education will be shaped by economic, social, and political factors. However, the benefits of changes can be enhanced through careful attention to desirable faculty roles, student preparation, and more human applications of technology.

Industry's Training Methods: Do They Have a Place in Academe? by Robert F. Mager, *Engineering Education,* November 1981.

It is suggested that the components of industry's teaching methods be closely inspected so that those of possible value to academe can at least be tried. Key differences between the academic and industrial environments are summarized, including purposes, definitions and consequences of success, responses to failure, and differences in students.

A typical instructional development sequence in industry for the design and implementation of courses is described. Examples of successes can be found at AT&T, the South African Broadcasting Corporation, the Bank of America, and in the U.S. Dental Public Health Service in San Francisco.

Although many techniques are applicable to academe, it is noted that faculty are not motivated to improve their instructional skills. In fact, there is a strong tendency in the university to exhort faculty toward more successful instruction and then to reward them for something entirely different.

Recommendations are offered to remove the obstacles to effective teaching, and to change the consequences of successful teaching from negative to neutral or positive. Faculty should be encouraged to take advantage of instructional technology that industry is already using.

Babb, Patricia. **"The President's Report on Science and Engineering Education."** *T.H.E. Journal,* September 1981, pp. 64-66. A review of a report on the adequacy of science and engineering education of all citizens and for professional development.

Braden, Roberts A. **"One Hundred Book Titles: A Twelve-Foot Shelf of Basic References for Instructional Design and Development."** *Educational Technology,* September 1981, pp. 41-43. A selected list of books on instructional development.

Johnson, James W. **"Education and the New Technology: A Force of History."** *Educational Technology,* October 1981, pp. 15-23. An article on the educational implications of new technologies, current trends, future uses, and notable successes.

Lawrence, Ben. **"Education and Instructional Technology: Issues in the Eighties."** *International Journal of Instructional Media,* Vol. 8 (1980-81), 287-297. A discussion of the competition for students between colleges and business and industry resulting from the high quality, low cost instruction and training available via technology.

Ploman, Edward. **"The Communications Revolution."** *Intermedia,* September 1981, pp. 7-11. An analysis of the characteristics of the communications and information revolution that are changing society.

Rainey, Gilbert L. **"How to Survive Instructional Innovation."** *Engineering Education,* November 1981, pp. 154-157. An examination of several techniques for the development of successful models of innovative instructional methods.

Legal/Regulatory Issues

"Eleventh Hour Deal on Copyright." *Broadcasting,* October 26, 1981, p. 23. A review of tentative agreement on cable copyright amendments reached by lobbyists of broadcasting, cable, and motion picture industries.

"First Amendment Rights of Public Stations Upheld." *Broadcasting,* November 2, 1981, pp. 40-41. A report on two court decisions involving the First Amendment rights of public broadcasting stations.

Price, David. **"Impressive Agreement."** *Cablevision,* November 2, 1981, pp. 13-14. A discussion of the compromise agreement reached by broadcast, cable, and motion picture representatives on cable copyright.

"Public Broadcasting Rocked by Verdict in Captioning Case." *Broadcasting,* November 2, 1981, p. 28. A look at a U.S. District Court ruling that requires public television stations to make programs accessible to the hearing impaired.

"Selling the Copyright Compromise." *Broadcasting,* November 2, 1981, pp. 24-25. A review of cable copyright agreement and the reactions of representatives of the broadcast, cable, and motion picture industries.

"Teletext, DBS Top FCC Agenda." *Broadcasting,* October 26, 1981, p. 25. A report on FCC rulemaking session that proposes to authorize television stations to provide teletext services, and that accepted seven applications for direct broadcast satellites.

"The Reaction." *Cablevision,* November 9, 1981, p. 14. A report on the reactions of cable operators to the cable copyright agreement.

"VCR's Lose Legal Round on Copyright." *Broadcasting,* October 26, 1981, p. 24. A review of an appeals court ruling that held home recording of copyrighted programs off the air was in violation of copyright laws.

Research

Braverman, Barbara B., et al. **"Effects of Language Level and Visual Display on Learning from Captioned Instruction."** *Educational Communication and Technology Journal*, Vol. 29 (1981), 147-154. A study on the influence of language level of captioning on the reception of visual information by hearing impaired viewers.

Danielson, J.E., William J. Seiler, and Gustav W. Freidrich. **"Learners Cognitive Style and Levels of Learning in Television and Print Instruction for Use in Open Learning: An Exploratory Study."** *International Journal of Instructional Media*, Vol. 8 (1980-81), 371-379. An examination of the achievement of open learners given educational programs which use a variety of media.

Root, Jon R. and Meredith D. Gall. **"Interactions Between Student Achievement Orientation, Locus of Control, and Two Methods of College Instruction."** *Educational Communication and Technology Journal*, Vol. 29 (1981), 139-146. A comparison of the effects of two methods of instruction on different types of students and a discussion of how these methods may be applied in college settings.

Broadcast Television

Snap, Crackle, and Pop: Learning from Television, by Joseph H. Oshins, *Change*, October 1981.

A basic assumption raised in this article is that television has yet to begin tapping its great potential as an instructional device. Although there have been some enrollment successes for telecourses (e.g., Miami-Dade Community College, Chicago TV College, Dallas County Community College District), by and large television education is neither attracting a broad audience, keeping those it has attracted, nor making good money. It is shown to be a dangerously poor way to teach since there is little or no direct faculty and student interaction; the courses must usually be leased or otherwise acquired from outside the credit-granting institution; printed materials used in conjunction with TV courses often must be modified; and TV courses require high front-end and administrative expenditures (almost always at the expense of more traditional, faculty-related ventures).

On the other hand, although commercial television programming ignores higher education and especially liberal education, the television commercial itself is the most effective and efficient method of mass education ever devised.

Three beneficial forms of higher education can and should, therefore, be taught effectively by television commercials: (1) teaching a wide range of facts, points, or principles that would help people improve their lives; (2) attracting interest for more involved study, such as the fascination of scholarly research or specific books and works of art; and (3) informing people about higher education—what is available, where and how to get it, what good it will do, or how education and research are crucial to the world.

"Ad Experiment OK'd for Public Broadcasting." *Broadcasting*, October 19, 1981, p. 59. A report on the approval of an experiment authorizing public broadcasters to carry advertising.

Behrens, Steve. **"Travails in Two Cities."** *NAEB Current*, October 12, 1981, pp. 1 & 7. A description of two minority-controlled public television stations.

"Broadcasters Caution FCC to Be Wary of LPTV Interference." *Broadcasting*, October 19, 1981, pp. 44-45. A review of comments by commercial broadcasters on the interference of low power television with full-power station signals.

"CPB Describes Guidelines of Annenberg Grant Program." *Broadcasting*, October 5, 1981, p. 41. An announcement of the goals and guidelines for financing the development of college-level instructional programs.

"CPB Nominees Reviewed in Senate Hearing." *Broadcasting*, November 2, 1981, pp. 42-43. A report on the comments of two nominees to the CPB board before the Senate Commerce Committee.

"CPB on the Prowl for New Ways to Fund the Future." *Broadcasting*, November 9, 1981, p. 29. A report on the establishment of a task force at CPB to study long-range financing alternatives for public broadcasting.

Feeback, Ronald W. and William F. Vartorella. **"A 'Back to Basics' Studio for $10,000."** *E&ITV*, October 1981, pp. 52-54. A profile of television studio designed and built with limited resources at Mary Baldwin College.

"50th Anniversary Issue." *Broadcasting*, October 12, 1981. An entire issue devoted to the highlights of the publication and an overview of predictions for the future of electronic communications.

Gladstone, Brooke, **"Can We Live With Ad Clusters?"** *NAEB Current*, October 26, 1981, pp. 1-2. A view of problems relating to the public television advertising experiment.

Gordon, Richard L. **"Public TV Pushes for Ad Test."** *Advertising Age*, September 21, 1981, p. 2. A report on CPB board action to discuss with FCC advertising demonstration program for public stations.

"Grossman Ideas to Offset Funding Cuts." *Broadcasting*, November 2, 1981, p. 72. A report on PBS President Grossman's proposals for a series of programming plans to offset the loss of federal funding.

Gruebel, Jerold, **"Plan Ahead When Using Telecourses for Credit."** *E&ITV*, September 1981, pp. 63-68. An overview of the Indiana Higher Education Telecommunications System and its first experience in leasing telecourses.

Kincheloe, Joe L. **"That Thing's a Veritable Window on the World: Thoughts on Using TV."** *International Journal of Instructional Media*, Vol. 8 (1980-81), 367-370. An article addressing the validity of television as a learning tool and promoting its use by educators.

"NAEB On Verge of Collapse." *Broadcasting*, November 9, 1981, p. 63. A report on the dissolution of the National Association of Educational Broadcasters due to financial problems.

"No Boob Tubes." *Time*, October 5, 1981, p. 46. A report on the national program of telecourse broadcasts made available by PBS.

"Now to Plan the Ad Test." *NAEB Current*, October 12, 1981, p. 5. A report on the organization of the public broadcasting advertising test.

"PBS Ponders New Way to Raise Funds Through New Network." *Broadcasting*, October 26, 1981, p. 60. A review of proposed ITFS network for distribution of instructional and informational programming via satellite.

"Pfister Urges Public Broadcast Unity." *Broadcasting*, November 9, 1981, p. 63. A description of an address given by CPB President Pfister at the NAEB annual convention.

"Pfister Urges Togetherness for Public Broadcasters." *Broadcasting*, October 19, 1981, p. 59. A review of an address by CPB President Ed Pfister.

"Prospect of Commercials on PTV." *Broadcasting*, September 21, 1981, p. 26. An overview of a study on revenues anticipated from the selling of commercial

advertising clusters on public television.

"Pubcasters Pragmatic, Skeptical Towards Ads." *NAEB Current*, October 26, 1981, pp. 1 & 4-5. A survey of 20 broadcasting professionals on the possibility of clustered advertising on public television.

"Stating the Art at MDS '81." *Broadcasting*, October 19, 1981, pp. 55-57. A report on first annual convention of multipoint distribution service companies, which focused on theft of service, programming, and future uses.

Suter, Barbara Gore. **"Almost A Religious Experience: Impressions of the 'Reaching the New Student' Conference."** *T.H.E. Journal*, November 1981, pp. 59-66. A review of a conference held by telecourse producers on the applications of technology for course delivery.

Cable Television

Special Programming for Special People, by Marg Pullishy, *Cable Communications*, September 1981.

The response of community television to the needs of the handicapped is described by the special projects coordinator of QCTV, Ltd., in Edmonton, Alberta. QCTV provides weekly programming for the deaf, blind, and physically disabled. As a result, nonhandicapped viewers are more at ease with sign language, white canes, and wheelchairs. Examples of problems and experiences in programming for each of these groups are reviewed.

There has been a very positive reaction from the community. The disabled have seen the programming as a vehicle not only for informing the public in general, but for unifying the disabled themselves. Those working with the disabled hope to use the series as part of a training package for new people seeking work in the area. Other people want to know more about the disabled but are afraid to ask, and the programming has filled their need as well.

Applebaum, Simon. **"Giving Credit to Cable Education."** *Cablevision*, November 9, 1981, pp. 40-46. A discussion of the problems with educational programming on cable and a look at several working relationships between the two.

Brown, Ben. **"The Going Gets Tough For a Public-Access Showcase."** *Channels*, October/November 1981, pp. 68-69. A profile of East Lansing, Michigan, as

SOURCESCAN

Books, research papers, and occasional papers with information on how to obtain the publications.

Television in Community and Junior Colleges: An Overview and Guidelines, by James Zigerell, James O'Rourke, and Theodore Pohrte. Available from ERIC Clearinghouse on Information Resources [Syracuse University Printing Services, 125 College Place, Syracuse, NY 13210]. 1980. 41 pp. $6.

An analysis of the use of television, particularly telecourses, in two-year postsecondary institutions that focuses on current developments in the field, research supporting these efforts, and how to begin using the new technologies at community and junior colleges.

Towards More Effective Teaching and Learning: New Directions for Educational Technologies in the 1980's: Research Studies, by James Botkin, James P. Keen, John McClellan, and Helen Robinette. Available from Helen Robinette, International Center for Integrative Studies [45 West 18th Street, New York, NY 10011]. 74 pp. $9.95.

A review of recent studies and research efforts in educational technology with an emphasis on computers and microcomputers.

Report on the U.S. Department of Education Task Force on Learning and Electronic Technology, Office of Educational Research and Improvement, U.S. Department of Education [400 Maryland Avenue SW, Room 3079, Washington DC 20202] 1981. 27 pp. Free.

Reviewing information from other reports and studies, survey data, literature, previous technology programs of Department of Education and other federal agencies, as well as current activities and future plans of private sector companies, this report examines the many uses of technology for education. Included are a list of barriers to the development and implementation of technology in education and recommendations for overcoming the barriers. A chronological overview of major developments in departmental use of telecommunications and a bibliography of references are also provided.

Catalog of Instructional Audio Resources, Corporation for Public Broadcasting, Office of Educational Activities [1111 16th Street NW, Washington, DC 20036]. 1979. 59 pp. Free.

A listing of 165 audio resources available for instructional use. This booklet is intended for audio producers, program directors of public radio stations, and instructors.

Telecommunications in the U.S.: Trends and Policies, edited by Leonard Lewin. Artech House Books [610 Washington Street, Dedham, MA 02026]. 1981. 528 pp. $45.

Forecasts by engineers and policymakers on the future of telecommunications. This book also looks at regulation/deregulation, teleconferencing, home and office automation, international finance and development, broadcasting, and other policy areas that must be addressed in the burgeoning area of telecommunications.

1982 Catalogue of Recorded Visual Instruction, Great Plains National [P.O. Box 80669, Lincoln, NE 68501; 402/472-2007]. 1982. 170 pp. Free.

An annotated listing of available GPN materials in recorded visual instruction including 26 new series. Formats are primarily 16 mm film and videocassette. Categories include College In-Service and the Adult Series. Information is provided on group buys, quantity discounts, general previewing, and cablecasting.

Oklahoma State University Veterinary Medicine Satellite Teleconference: A Report, August 21, 1981. Available from Jay O. Granthum, director, University Extension, Oklahoma State University, [Stillwater, OK 74078; 405/624-6606]. 76 pp. Free.

Provides a detailed description of the development and implementation of a statewide professional continuing education teleconference conducted by the OSU Educational Television Service with assistance of Oklahoma City KTVY's remote facility. This report includes an overview of the background, program, and objectives of the teleconference as well as an analysis of the results.

a model of public access programming.

Canon, Gail. **"How CATV Channel 20 Serves the Hearing-Impaired."** *E&ITV*, October 1981, pp. 55-57. An examination of a captioning program for deaf students.

Caranicas, Peter. **"Cable TV's Culture War."** *Saturday Review*, October 1981, pp. 32-35. A review of the various cultural cable services now available from the three networks and public television.

Clinton, Helen E. **"Local Origination—A Community Affair."** *E&ITV*, October 1981, pp. 92-94. A report on the development of locally originated programming in communities served by cable.

"Closing the Cable Gap in the Top 30 ADI's." *Broadcasting*, October 26, 1981, pp. 28-34. A listing of cable franchises awarded in the top 30 television markets.

"Educational Provisions in Recent Franchising Activity." *Cablevision*, November 16, 1981, p. 63. A list of educational provisions requested by cities in cable franchise negotiations and the companies' response to the requests.

"Examining the Barriers to Minorities in Cable Franchises." *Broadcasting*, November 9, 1981, pp. 54-55. A report on testimony of cable industry professionals on how minorities and small businesses can improve their financial position to operate cable systems.

Grossman, Lawrence K. **"Arguing Against History."** *Channels*, October/November 1981, pp. 16 & 56. A discussion of public broadcasting's role in cable television, and PBS's pay-cable service.

Hill, Arthur. **"Are Cable and the Cities Overstating Their Differences?"** *TVC*, October 1, 1981, pp. 84-85. A report on a lobbying effort to repeal sections of communications legislation that include provisions on franchise fees and rate regulation by the cities.

Jacobs, Bruce. **"Building Community Support for Cable Access."** *Access*, September 21, 1981, pp. 1-2. A discussion of three organizational models for community support of cable access.

"Lack of Industry Support Ends College Program." *Cable Communications*, October 1981, p. 36. A report on the dissolution of a technical training program for cable television personnel offered by a Canadian college.

Metz, Brad. **"Interactive Systems Facing Marketing Dilemma."** *CableAge*, October 19, 1981, pp. 17-20. A look at marketing considerations for cable systems offering a variety of services.

Miller, Cynthia Harbett, Robert D. Murphy, and Ramona R. Rush. **"Seven Years of Campaigning: The Evolution of Cable in Lexington, Kentucky."** *Public Communications Review*, Fall 1981, pp. 30-36. A case study of a cable franchise awarded in Lexington, Kentucky.

"Minorities in Cable: Oversight Hearings Continue." *Broadcasting*, October 19, 1981, pp. 49-50. A review of testimony on the opportunities for minority ownership of cable systems given before a House subcommittee.

Rosenthal, Edmond M. **"Important Battles Won Against Theft of Service."** *CableAge*, September 21, 1981, pp. 8-12. A report on measures taken by system operators to prevent unauthorized reception of basic and pay-TV service.

Smith, Don R. **"Library Clout in Local Cable."** *American Libraries*, September 1981, pp. 500-503. An examination of a public library's community programming via cable.

"UCC Opens Cable Education Workshop." *Broadcasting*, October 5, 1981, p. 44. An announcement of an educational program sponsored by the United Church of Christ to teach local leaders the fundamentals of cable television.

Vedro, Steven R. **"Market Your Programs to CATV by Assessing Needs."** *E&ITV*, September 1981, pp. 52-55. An overview of the marketing approach to cable franchising—assessing community needs and the ability to meet them—used by the University of Wisconsin.

"Why Advertisers Are Rushing to Cable TV." *Business Week*, November 2, 1981, p. 96. A report on the financial prospects for cable television advertising.

Instructional Television Fixed Service

"ITFS Growing Now, But Threatened." *NAEB Current*, September 14, 1981, p. 4. A report on the possible reassignment of ITFS' reserved educational channels.

Teletext/Videotext

Teletext for the Home and School at KCET, by Ronald J. Goldman, *E&ITV*, October 1981.

Broadcast teletext is a technology with the potential to make watching the TV set an active rather than a passive experience and that has the capacity of making television a truly interactive learning tool. It makes possible the transmission of alpha-numeric information to the television receiver in the home, school, or any chosen location. Special decoders attached to television receivers allow viewers to select from "pages" (screenfuls) of information at any time.

The Los Angeles public television station, KCET, has been a pioneer in exploring the capabilities and applications of this technology. In April 1981, it began offering a daily teletext service using the French Antiope system. This field test involves placement of decoders in 100 private homes, six schools, and several public locations in the Los Angeles area. The objective of the experiment is to identify the market for teletext services.

KCET believes that the potential of teletext extends beyond entertainment and advertising uses; the field test focuses on journalistic and educational applications. The principal component is *NOW!*, an electronic news magazine, containing 60-80 pages of timely news and community information that can be updated at any time.

In five elementary and one high school, KCET is testing the effectiveness of education-related teletext materials. Three areas are being explored: (1) teletext exercises to supplement in-school instructional television programs, (2) interactive-learning quizzes to both complement and supplement the regular school curriculum, and (3) information services to teachers.

"An Experimental Teletext Monitor." *E&ITV*, October 1981, pp. 32 & 34. A discussion of a European company's experiment with a viewdata system that can be adapted for use in various demonstration situations.

Danna, Sammy R. **"FEP—Field's Teletext System."** *E&ITV*, October 1981, pp. 42-46. A profile of the first commercial teletext system in operation in the U.S.

"State Department to Examine Value of International Videotext Standard." *Broadcasting*, November 2, 1981, pp. 77-78. An announcement of an open meeting held to formulate a U.S. position regarding an international standard for videotext systems.

"Times Mirror to Start Videotext Test in California." *Broadcasting*, October 26, 1981, p. 52. A report on videotext marketing test slated for southern California.

"TM Slates Videotext Test for February." *Advertising Age*, October 26,

1981, p. 10. A report on the Times Mirror videotext text using Canadian Telidon equipment.

"Transactional Videotext Test Set." *Advertising Age*, November 23, 1981, p. 100. A report on videotext test that will offer home shopping, banking, and electronic mail services.

"Who's Doing What with Teletext?" *E&ITV*, October 1981, pp. 47-49. A review of the variety of teletext/videotext experiments now underway in the U.S. and Canada.

Computers

Educational Technology and the Future, by Alfred Bork, *Journal of Educational Technology Systems*, Vol. 10, (1980-81).

The computer and such associated devices as the optical videodisc are presently little used in the learning process. However, this use is likely to increase rapidly in the future. Implications for educators are discussed in this article.

After a brief review of learning theories, it is suggested that the intelligent videodisc (a combination of the computer and optical videodisc) can offer much to the instructional/learning process. A videodisc would contain computer code, video sequences, slides, and audio. It allows instructors to bring full multi-media capability into the computer environment to make films and slides interactive, as opposed to passive, learning media.

The value of personal computers in general is discussed, particularly applied to the learning process, and examples of computer-aided learning are noted. It is suggested that visual information can play an important role in the learning process.

"Intelligent" videodisc systems are also shown to be significant to the learning process, and to have a distinct advantage over the computer since they can provide slides and video sequences relatively easily. The videodisc provides a way of storing all the media and making them accessible to the learner.

It is concluded that an educational system is more than delivery hardware, even if the hardware is as exotic as the computer or the intelligent videodisc. However, many developers seem to have given little thought to the long-range effects of the new technology on educational institutions, teachers, and learners.

Learning Strategies and Computer-Based Instruction, by Patrick H. McCann, *Computers and Education*, Vol. 5 (1981).

Some models and an experimental framework of present educational applications of computers are presented in this article. After a brief review of how contrasting models of computers have been used in training, a description of empirical studies relating to a theory of instruction shows how the studies have influenced the instructional application of computers. The focus of this article is on instructional strategies designed to enhance the pedagogical use of computers.

It is shown that one of the basic assumptions underlying the use of computer-based instruction (CBI) is that learner characteristics play an important role in the instructional process. A good CBI program takes the greatest advantage of the student's particular strengths and minimizes the effect of his or her weaknesses. However, to date no instructional methodology has been sophisticated enough to both acquire and use enough information about the learner to provide such ideally individualized instruction.

It is concluded that perhaps the student is his or her own best teacher and that instructional decisions should be left to the student's discretion. It appears that the computer-based instructional management system may offer the best alternative for combining student control of instruction with adaptive programs available at the student's option. In order to realize the new aptitudes for learning and new attitudes toward learning attributed to learner control, while at the same time taking advantage of the adaptive potential of CBI, it is necessary to test the efficacy of systems that tap the best of these two instructional worlds.

Anderson, John. **"State Support For Computer Dissemination: A Reassessment of California's Public Network For Instructional Development."** *T.H.E. Journal*, September 1981, pp. 54-56, 66. A report on administrative problems that are plaguing the California computer network for instructional development.

"Computers and Individual Liberty: Perspectives for the 80's." *Technology and Society*, Fall 1981, pp. 11-15. A profile of an experimental computer conferencing network designed to study the ways in which new technologies affect human communication.

"Compute to Survive, U. of Pitt Tells Schools." *T.H.E. Journal*, November 1981, pp. 46-47. A look at the University of Pittsburgh's computer facility.

Ferrari, G., P. Forcheri, E. Lemut, and M.T. Molfino. **"Introduction to Coordinating Programming Concepts in University Courses."** *Computers and Education*, Vol. 5 (1981), 141-145. A description of an experiment involving the use of computers for instruction in a university mathematics program.

Fertuck, Len. **"TREE: A Computer Environment for Business Schools."** *Perspectives in Computing*, October 1981, pp. 4-11. A description of a computer software system designed to help business students in their problem-solving.

Gagne, Robert M., Walter Wager, and Alicia Rojas. **"Planning and Authoring Computer-Assisted Instruction Lessons."** *Educational Technology*, September 1981, pp. 17-21. A proposal for the design and implementation of computer-assisted instruction program based on expected learning outcomes.

Gilmore, C.P. **"Build A Home Computer Center."** *Popular Science*, November 1981, pp. 100-101. A guide to building a computer console for the home.

Hawkins, William J. **"New Personal Computers—Now the Big Guns Have Arrived."** *Popular Science*, November 1981, pp. 93-97. A review of the personal computers now being offered by several major industrial companies.

Hawkins, William J. **"New Software Makes Your Personal Computer A Real Workhorse."** *Popular Science*, November 1981, p. 107. A random sampling of the variety of programs available for home computers.

Huntington, John R. **"The Impact of Changing Computer Resources on Educational Institutions and Computer-Based Education Training Programs."** *Educational Technology*, October 1981, pp. 55-59. A discussion of the technology/training gap among educators who are involved in evaluating and administering computer-based education systems.

Johnson, K. Jeffrey. **"Five Applications of Computer in the Chemistry Curriculum."** *Computers & Education*, Vol. 5 (1981), 147-162. A paper examining the application of computer courseware in the undergraduate chemistry curriculum at the University of Pittsburgh.

Johnson, Richard R. **"Computers and Liberal Education in the Humanities and Social Sciences."** *AAHE Bulletin*, October 1981, pp. 12-13. A reprint of a review

of the present uses of microcomputers in education and their effect on the teaching of humanities and social studies.

Klassen, Daniel and Myron Solid. **"Toward an Appropriate Technology for Education."** *Educational Technology*, October 1981, pp. 28-31. A discussion of the role of the computer in education.

Malcolm, Andrew. **"Teaching English to the Deaf."** *Perspectives in Computing*, October 1981, pp. 30-39. A profile of a program designed to teach English to prelingually deaf students using the computer.

"New Territory for Venture Capitalists." *Business Week*, October 19, 1981, pp. 103 & 106. A report on the outlook for venture capitalists investing in microcomputer software.

Roecks, Alan L. **"How Many Ways Can the Computer Be Used in Education? A Baker's Dozen."** *Educational Technology*, September 1981, p. 16. A list of computer applications in education.

Smith, Lee. **"Computers for Klutzes."** *Fortune*, November 2, 1981, pp. 125-131. A report on a new computer component that is modelled on the right side of the brain and does not rely on linear logic.

Touzeau, Roy F. **"The Software Crisis: Causes and Solutions."** *International Journal of Instructional Media*, Vol. 8 (1980-81), pp. 309-314. An examination of new developments which could bring computer software development up to pace with that of computer hardware.

Townsend, Barbara and Deborah Hale. **"Coping Strategies for Resistance to Microcomputers."** *T.H.E. Journal*, November 1981, pp. 49-50, 52. An analysis of suggested strategies for dealing with faculty opposition to the use of microcomputers for instruction.

Turoff, Murray and Starr R. Hiltz. **"Exploring the Future of Human Communication Via Computer."** *Technology and Society*, Fall 1981, pp. 5-10. An interview with Alan F. Westin, outlining his views on the influences of technology upon individual's privacy.

Radio

de Fossard, Esta. **"Radio Instructional Programs: Some Practical Guidelines for Scriptwriters and Planners."** *Development Communication Report*, September 1981, pp. 6-7. A guide to developing scripts for instructional radio programs.

Satellites

Chiaviello, Anthony. **"SCUC 81: Biggest and Best!"** *Satellite Communications*, October 1981, pp. 24-31. A description of the Satellite Communications Users Conference held in August 1981.

Cohen, Stanley E. **"Meet Casts Doubts on Direct Broadcast."** *Advertising Age*, October 12, 1981, p. 66. A report on a one-day conference focusing on the impact of new technologies on existing media.

Erdman, Ann. **"Imaginative Use of Nonbroadcast Technology Directs Social Services to Isolated Audience."** *Development Communication Report*, September 1981, pp. 1+. A review of public service projects involving the use of satellite-delivered communications.

"House Looks for Answers on DBS." *Broadcasting*, September 28, 1981, p. 44. An account of House subcommittee hearings on direct broadcast satellites.

Howkins, John. **"Television by Satellite: Crossing Borders and Wires in Europe."** *Channels*, October/November 1981, pp. 67-68. A discussion of the potential of satellite broadcasting for European countries.

"Language Classes to Take the 'Bird'?" *NAEB Current*, p. 7. A profile of a research project involving the use of international communications satellites to deliver foreign language education.

Myers, Debra. **"1981 Directory of Regulatory Agencies, Satellite Carriers, Services, and Hardware and Component Suppliers."** *Satellite Communications*, September 1981, pp. 6-56.

"New Earth Station Design Emerges As A Surprise." *Broadcasting*, October 26, 1981, p. 54. A report on a new satellite dish design that may reduce satellite spacing.

Shaw, Stephen. **"A Shopper's Guide to Business Satellite Services."** *Satellite Communications*, October 1981, pp. 39-44. A guide to selecting business satellite services and profiles of the scope and costs of offerings provided by several suppliers.

Smith, Susan Renner. **"Now: More Channels, Plummeting Prices for New Backyard Satellite-TV Antennas."** *Popular Science*, November 1981, p. 103. A report on increasing practicality of backyard satellite dishes.

Taylor, John P. **"Flurry of Applications for DBS Authority Creates Dilemma for FCC and Threatens Broadcasters."** *Television/Radio Age*, September 21, 1981, pp. 40-42. A report on the implications of the 14 DBS applications before the FCC.

Thomas, Willard and Cinda Thomas. **"[illegible] Is Betting on the Birds?"** *E&ITV*, [illegible]ber 1981, pp. 73-74. A comparison of projections made about satellite transponder sales and the actions and future plans of organizations having purchased them.

Telephone

"Dialing Locally—Without AT&T." *Business Week*, October 5, 1981, pp. 102 & 106. A look at lower cost technologies that are competing with AT&T to provide data communications services.

Swerdlow, Joel. **"Why Is Everyone Afraid of Ma Bell?"** *Channels*, October/November 1981, pp. 29-33. A look at the issues surrounding AT&T's entry into information dissemination services.

Copy Delivery Systems

Videodiscs Suggest a New Theory of Interactive Media, by John Ciampa, *Intermedia*, September 1981.

The interactive videodisc, more than any other of the new technologies, must deal with the element of choice, taking into account the user's needs. This "interactivity" represents a radical departure from traditional uses of the television screen.

After a brief description of the videodisc itself, it is suggested that the disc will, of necessity, involve a more active consent of the public than broadcast television. Various systems and levels of user control are outlined. For example, a disc with high interactivity makes possible a greater variety of combinations in answering a user's instructions.

It is suggested that the videodisc in essence, allows a user to "talk back." As a result, videodiscs will have more impact than other technologies, like broadcast television, which offer only passive mass communication.

Conversation with Nicholas Negroponte, *Videography*, October 1981.

Negroponte, professor of computer graphics in MIT's Department of Architecture, and his group have been studying developing communication between

humans and computers. They added an optical videodisc to their hardware in 1977 and began exploring the ways in which databases of visual information could be stored on the disc and accessed as part of an information system. Since then, Negroponte has expanded the scope of the experimentation with the videodisc beyond design and architectural applications.

For example, they have created a map of the city of Aspen, Colorado, on an optical disc that moves the viewer on command to any street location by using the capabilities of the player interfaced with a computer. Other work has consumer and educational applications.

MIT plans to include Negroponte's Architecture Machine Group Laboratory in the institution's planned Arts and Media facility. It will physically consolidate many well-established activities in the visual arts, cinema, broadcasting, publishing, and electronic music with teaching, basic research, and new applications in the most modern computer-based information, information processing, display, and interactive systems.

This interview with Negroponte gives his views on the interdisciplinary approach to the videodisc.

"Betamax Backlash." *Broadcasting*, November 9, 1981, pp. 56-57. A report on remarks by Register of Copyrights concerning recent court ruling on home video recording of copyrighted material.

"Cassettes Extend Outreach For Engineering Schools." *NAEB Current*, September 28, 1981, p. 5. A report on a videotape service for professional education.

Chase, Dennis. **"RCA Gives Peek At Disc Plan For Europe."** *Advertising Age*, October 19, 1981, p. 24. A report on RCA's entry into the European videodisc market.

Feldman, Leonard, **"The Coming Record Revolution: Digital Discs."** *Popular Science*, November 1981, pp. 105-106. A discussion of the digital audio disc and comparison of three systems in development.

Philipson, Willard D. **"Video Systems: Instructional and Training Uses."** *International Journal of Instructional Media*, Vol. 8 (1980-81), pp. 329-332. A discussion of the latest developments in the instructional and training uses of video systems.

"Videocassette or Videodisc—An Alternative?" *Cable Communications*, September 1981, p. 52. A review of the characteristics of videocassettes and videodiscs as complementary systems.

Interactive Video

Bohne, Henry F. **"Interactive Video—It Takes Skills You Already Have."** *E&ITV*, October 1981, pp. 73-77. A review of requirements for setting up an interactive video system for instruction.

Meadows, Edward. **"The Slippery Market for Videodiscs."** *Fortune*, November 2, 1981, pp. 82-88. A report on the marketing war being waged by RCA videodisc system in competition with videocassette recorders.

Free, John. **"For the 80's, A Decade of Wonders in Home Electronics."** *Popular Science*, November 1981, pp. 98-99. A review of upcoming developments in home video products.

"Home Terminals Are Reality, But Are Consumers Ready?" *Broadcasting*, October 5, 1981, pp. 32-33. An announcement of a study to be conducted on the readiness of consumers to accept home video services for shopping, banking, etc.

Lachenbruch, David. **"Video Disk vs. Video Disk."** *Channels*, October/November 1981, pp. 42-66. A comparison of two incompatible videodisc systems and the different markets for each.

Multi-Media Systems

Remote Teaching by Electronic Blackboard, by Madhu S. Gupta, *Engineering Education*, November 1981.

Reactions to, and experiences of teaching at remote locations through the use of an electronic blackboard are reported. The electronic blackboard is a recent addition to the variety of technologies available for delivering instruction.

It transmits two kinds of information between the instructor and the learner: voice and blackboard writing, including any diagrams or charts drawn on a blackboard. The writing is done on a special pressure-sensitive blackboard, which converts chalk strokes to audio frequency electrical signals, so that the voice and the writing signals can be handled by the same equipment.

This technology has the prospect of widespread use within a short time for several reasons: its installation and operating cost is very low, compared to television systems; it can be initiated with a minimum of effort and planning since a telephone company supplies and maintains the equipment much like a telephone; and it can immediately reach wherever there is an existing telephone line.

Besides the obvious benefit to students in remote locations, the electronic blackboard is also useful for in-class students and instructors. The memory feature of the blackboard, for example, allows a previous lesson or diagram to be reviewed easily.

Mechanical, pedagogical, and psychological limitations are inherent in this technology, but it does seem to be especially applicable to off-campus programs. The experiences of one instructor at the University of Illinois Chicago Circle are also noted.

"Electronic Newspapers Are Becoming A Reality." *Communications News*, November 1981, p. 20. A report on the market for electronic information systems in the home.

"Electronic Mail Network Providing Low-Cost Communications for Deaf." *Communications News*, November 1981, p. 43. A look at an electronic mail network developed to improve communications among deaf people.

Irwin, Stephanie. **"Video Variety at the Kettering Medical Center."** *E&ITV*, October 1981, pp. 68-72. A description of a medical center media department that offers four closed circuit television channels for patients and staff.

Lukas, Terrence. **"How To Set Up An Electronic Bulletin Board."** *T.H.E. Journal*, September 1981, pp. 50-52. A description of an information system incorporating microcomputers.

Print

Keane, Joseph A. and L. John Durney III. **"Courses by Newspaper: A Local Approach."** *Continuing Higher Education*, Fall 1981, pp. 18-20. A description of locally generated courses by newspaper as an alternative to the national program which is seen as not serving individual colleges' needs.

MACROSCAN

Programs, projects, conferences, workshops, other events, and funding sources.

Nigerian Open U. Holds Telecourse Workshop

Through its planning efforts to create an Open University of Nigeria, the Nigerian Ministry of Education conducted a one-week workshop, "Instructional Design Strategies for the Open University of Nigeria." Representatives from the United States and the British Open University worked with 70 Nigerian academics to develop instructional materials. At the same time, a planning committee has been involved in doing research on the implementation of a national open learning system, and creation of the Open University is pending the passage of authorizing legislation.

Serving as faculty to the workshop were three U.S. representatives: Sally Beaty, director of the Southern California Consortium for Community College Television; Dee Brock, director of Adult Learning Programming at the Public Broadcasting Service; and Penny Richardson, assistant professor at the University of Southern California. Both American and British participants addressed issues of production, writing and editing of print materials, and management of regional learning centers.

A brief synopsis of the workshop is available from Penny Richardson, Center for Research on Adults and Lifelong Learning, University of Southern California, P.O. Box 77963, WPH 701, Los Angeles, CA 90007.

Technology Conference Focuses on Television

On October 1, 1981, the School of New Resources of the College of New Rochelle hosted a conference, "Technology in Adult Education: Television." Speakers included Susan M. Kryczka, Illinois Institute of Technology; Sister Irene M. Fugazy, Archdiocese of New York; John W. Healy, Iona College; and Dee Brock, Public Broadcasting Service. Presentations addressed issues related to consortia, in-house production of telecourses, and credit and non-credit programs in business and industry.

For further information about the conference and/or the telecourse program at the School of New Resources, contact Lois Rekosh, director of External Programs, School of New Resources, College of New Rochelle, New Rochelle, NY 10801; 914/235-3084.

EDUCOM Sponsors Annual Conference and Regional Workshops on Computing and Higher Education

The EDUCOM Annual Conference, "Converging Technologies on Campus: Critical Decisions for College and University Officers," co-sponsored by the American Council on Education, brought together 275 attendees in Kansas City, Missouri on October 19-21, 1981. Plenary sessions focused on creative relationships between universities and faculty for technology transfer, structural and organizational alternatives for the campus, as well as current planning strategies for the application and management of technology. Participants had the opportunity to use an electronic mail system provided by EDUCOM, featuring portable computer terminals to send and receive messages. A public terminal room gave many attendees the opportunity to use such a system for the first time.

The annual conference also launched computer-based conferences on three topics, "National Information Policy," "Broadband Communications on Campus," and "Network Support for Microcomputer Users," scheduled over the next several months. A computer-based conference is an activity in which people use computer terminals to enter, re-

trieve, and share comments on a particular topic at any time. There is no need to select a time and place for group discussion. Such conferences do require that participants have access to a terminal and periodically connect to the agreed-upon computer system to send and receive comments. EDUCOM will be initiating additional computer conferences at a later date.

Transcripts of selected plenary sessions and further information about the computer conferences are available from EDUCOM, P.O. Box 364, Princeton, NJ 08540; 609/734-1915.

EDUCOM also sponsors a series of one-day seminars on creative ways to manage the growth of microcomputer use on campus. James Johnson, director of Academic Computing at the University of Iowa and director of the CONDUIT project, is presenting the seminars, which focus on case studies of instructional, administrative, and research uses of microprocessing systems. Seminars are scheduled for fall 1981, late spring and summer 1982, assuming there is sufficient interest. Those interested in attending future seminars on "Managing Computers on Campus" should call or write Carol Parysz at EDUCOM.

Cable Workshop Draws Faculty and Administrators

The National Association of State Universities and Land-Grant Colleges Division of Urban Affairs, in conjunction with the University of Wisconsin-Milwaukee and the University of Wisconsin-Extension, held a workshop on cable television and its implications for higher education on October 2, 1981. The workshop focused, in part, on the impact that use of cable technology will have on faculty workloads, reward and incentive systems, and faculty rights to courses produced for television. Half of the workshop took place in a university television studio.

Resource people were drawn from the University of Wisconsin-Milwaukee and the University of Wisconsin-Parkside, as well as from East Lansing Research Associates in Michigan. Over 60 college and university faculty members and administrators from five midwestern and Great Lakes states attended the workshop.

Materials used in the workshop and other information can be obtained from Nevin Brown, assistant director for Urban Affairs, NASULGC, One Dupont Circle, Suite 710, Washington, DC 20036; 202/293-7120.

WNET/THIRTEEN and CCNY Sponsor Conference

More than 125 participants attended a day long conference entitled "Bridging the Gap: Working Adults and Higher Education" on September 24, 1981. The conference, supported by a FIPSE grant, was jointly sponsored by WNET/THIRTEEN and the City College of New York. Major topics of discussion included curriculum, applicability of learning experiences, and the role of the media for working adults.

Attendees primarily came from the university, trade union, business, and foundation educational communities. The conference capped a two-year collaboration between WNET/THIRTEEN and CCNY which has resulted in the establishment of a Center for Workers and Education, and the production of the first three programs of a planned 15-part telecourse on urban history.

For further information and a transcript of the conference proceedings, contact David Rosen, project coordinator, WNET/THIRTEEN, 356 West 58th Street, New York, NY 10019.

MET Pilot Project Offers Cable Service For Adults

In cooperation with the Massachusetts Department of Education's Community Education and Adult Services Bureau, the Somerville Community Schools Program will sponsor a pilot project delivering cable services to adult audiences over the local educational access channel. This project is one of several being conducted with support from the Corporation for Public Broadcasting to continue Massachusetts Educational Television's (MET) investigation of nonbroadcast distribution strategies.

The project will use parent education programs provided by MET. Print materials and locally generated interactive uses

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of cable, such as panel discussions, viewer call-ins, and interviews with representatives from local service agencies, will also be developed.

For further information on the Somerville project contact Donald H. Baptiste, director of continuing education, Somerville Public Schools, Highland Avenue, Somerville, MA 12043; 617/625-1335.

TAGER Surveys Literature on Interactive Cable

The Association for Higher Education of North Texas (AHE), owner/operator of the TAGER TV Networks, currently serves both closed circuit microwave and cable constituencies in the Dallas/Ft. Worth Metropolitan Area. AHE is undertaking a systematic review of the literature on interactive cable television. It is suspected that much of the research and reporting is not being done through the usual publication channels. If you know of related studies, reports, monographs, etc., or if you have developed a bibliography related to interactive cable and would be willing to share it with them, please send your information to Richard Stowe, director of telecommunications services, AHE, P.O. Box 688, Richardson, TX 75080.

Faculty Roles and Institutional Support Focus Of Workshop Sponsored By Capital Area Council

The Capital Area Higher Education Mass Media Council (CAHEMMC), an association of Washington, D.C. metropolitan area higher education institutions currently using or planning to use telecommunications for course delivery, sponsored a workshop entitled "Expanding Telecommunications in Higher Education: Faculty Roles and Institutional Support" on October 22.

The purpose of the workshop, hosted by Prince George's Community College, was to broaden faculty participation in using telecommunications technology and to expand faculty involvement in the development of media-supported, and distance learning. The workshop was also a reaction to the Corporation for Public Broadcasting's "Higher Education Utilization Study" which correlates successful use of telecourses with faculty approval and effective institutional support mechanism.

A presentation and analysis of several successful regional models, including the Guided Study Program of the University of Maryland University College, the Extended Learning Institute of Northern Virginia Community College, and the Telecredit Program of Prince George's Community College, was followed by small group discussions. Each group reported the proceedings of its deliberations, which focused on the identification of new faculty roles, internal and external obstacles to the development of new roles, and new learning support mechanisms.

For further information, contact Jacques H. Dubois, chairperson, CAHEMMC, Prince George's Community College, 301 Largo Road, Largo, MD 20772.

Telecommunications In Maryland Subject Of October Conference

The Maryland Association for Higher Education, a broad-based association within the Maryland Higher Education community, focused attention on the communications revolution at its 35th Annual Conference on October 9.

The theme of the conference "The Technological Frontiers in Higher Education: Electronic and Attitudinal Challenges" was planned to engage the higher education community in a debate on rapidly developing telecommunications activities in Maryland and elsewhere in the country. Highlighting the conference were addresses on the "electronic challenges" by Ralph Lee Smith, author of *The Wired Nation* and on the "attitudinal challenges" by Frederick Breitenfeld, Jr., executive director for the Maryland Center for Public Broadcasting. The day long conference was well attended and the discussions were instrumental in identifying issues and concerns.

For further information, contact Jacques H. Dubois, editor, *MAHE Newsletter*, Prince George's Community College, 301 Largo Road, Largo, MD; 20772.

Computer-Assisted Assessment Programs Available at CAEL

The Council for the Advancement of Experiential Learning (CAEL) has launched ENCORE, a newly developed computer-assisted assessment system. ENCORE assists adults in exploring careers and in evaluating the learning they have acquired from their life and work experiences for college credit or advanced standing. Through a computerized interactive program using five modules, ENCORE enables the user to explore the various roles he or she has played during his or her life; develop a list of skills and knowledge acquired in work and other roles; explore career options; learn how to gather evidence of prior learning; and obtain information about colleges and universities offering assessment of prior learning. While ENCORE provides the private interaction many users find valuable, it is not intended as a "stand-alone" system. Counselors are needed to help learners prepare portfolios. The evaluation of the evidence of prior learning itself remains in the hands of the faculty at the various academic institutions. The ENCORE system runs on several microcomputers ranging in cost from $3,500 to $8,000.

ENCORE is part of Project LEARN, a larger CAEL initiative supported under a grant from the W.K. Kellogg Foundation. The LEARN effort provides CAEL with the capability to inform postsecondary institutions about currently available computer-assisted career guidance programs. Another component of Project LEARN is a toll-free telephone number (800/638-7813) operating Monday through Friday, 9:00 am-8:00 pm, to provide callers with information about schools and colleges offering programs for the assessment of prior learning.

To help prepare colleges and universities for the radical ways in which they will be affected by the widespread availability of inexpensive personal computers, CAEL is sponsoring a series of two-day seminars on microcomputers and their impact on education. Sessions at these seminars are designed for academic officers and educators as well as for training and education directors in business and industry. The seminars address a variety of issues including the impact of personal computers on education and training; overcoming faculty fears of the technology; and the individual and institutional income-producing opportunities from microcomputers. In addition to a review of the microcomputer hardware, the seminars cover other related technologies affecting training and education such as videodisc, teletext, and voice synthesizers. Between January and June 1982, seminars will be offered in New Orleans, Orlando, Cincinnati, Seattle, Dallas, Washington, D.C., and possibly Denver.

For further information about ENCORE and the microcomputer seminars contact CAEL, Lakefront North, Suite 300, Columbia, MD 21044; 301/997-3535.

The following periodicals were reviewed for this issue of *TELESCAN*, but do not appear in our original list of publications (Sept./Oct. issue):

Computers and Education
Pergamon Press, Inc.

Continuing Higher Education
Association for Continuing Higher Education

Development Communication Report
Clearinghouse on Development Communication

Engineering Education
American Society for Engineering Education

Perspectives in Computing
International Business Machines Corporation

Public Communications Review
Boston University School of Public Communications

Technology and Society
New Jersey Institute of Technology

Contributors

Contributors to this issue of *TELESCAN* are listed below. The efforts of these individuals have been critical to our monitoring activities. **We urge those of you who wish to become part of this important information network to submit to *TELESCAN* items of potential interest to our broadly based audience.**

Frederick Baus
The Association of Higher Education of North Texas

Dee Brock
Public Broadcasting Service

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National Association of State Universities and Land-Grant Colleges

Peter Dirr
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The Digest of the Center for Learning and Telecommunications VOLUME 1 ISSUE 4

LEGISLATIVE REVIEW

Reports on legal issues affecting higher education's use of telecommunications for instruction.

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UMA explores use of cable TV for telecourse evaluations .....page 10

Information on computer, satellite, videotext, and audio cassette resources .....page 10

Community college offers national conferences via satellite .....page 11

Federal Cuts in Student Aid Programs Pose Risks for Instructional Telecommunications

by Michael Goldstein

As part of its program to both reduce spending and to limit the federal role in education, the Reagan administration has announced plans to dramatically cut federal support for postsecondary education, including very substantial reductions in student financial assistance. The administration's proposed Fiscal Year 1983 budget (which would affect most postsecondary programs in the 1983-84 academic year), calls for the elimination of two student aid programs (Direct Loans and State Student Incentive Grants) and for significantly lower funding for the remaining four (Guaranteed Loans, Pell Grants, Supplemental Grants, and College Work-Study). All told, federal support for student financial assistance would drop by nearly half, with remaining funds targeted for those currently termed "truly needy." Estimates that several hundred thousand students might lose all or part of their grants, loans, or work assistance appear reasonable if these proposals become law.

Also slated for cuts or outright elimination are many of the direct institutional support programs funded by the Department of Education, including the Fund for the Improvement of Postsecondary Education and the National Institute of Education.

The effects of these changes upon the postsecondary community, should they occur, obviously would be considerable. Aside from the possibility of a significant reduction in the number of students attending college, there is also likely to be a shift of students from higher- to lower-cost institutions (that is, from the private to the public sector), and from full- to part-time enrollment. Attending college as a way to survive during economically depressed times would become considerably less attractive, and military service might become more competitive. Indeed, a recent General Accounting Office study reports that present and proposed GI education benefits are not competitive with what a student can obtain without military service. The proposed cuts might cure that disparity.

The implications of these proposals for providers of postsecondary education via instructional telecommunications are unclear. On the one hand, experience dictates that institutions, faced with declining institutional and student aid support will likely respond with decreasing enthusiasm to programs that may be viewed as competitive. On the other hand, some institutions may view instructional telecommunications as offering new ways of competing for, attracting, and holding what may be a growing cohort of part-time students.

Increased competition for both resources and students may in turn have the effect of increasing the involvement of the state regulating bodies. Already some states are imposing enrollment limits on traditionally open-enrollment public universities, in recognition of the fact that one dollar of student tuition generally must be matched by two from the state coffers. While state support for instructional telecommunications, as a way to extend learning opportunities at less cost, may become more attractive, every cent diverted in this direction also will be viewed as coming out of the pockets of the institutions. Unless there is a clear payoff in terms of students and resources, institutions are likely to resist growth in this area even more vigorously than in the past.

The administration's proposed drastic cuts in student financial assistance and other forms of support for higher education may never come to pass. The Congress may decide that there are just too many voters with college age children, or that commitment to equal access cannot be rolled back with such impunity. Or

continued on p. 3

The Center is a program of the American Association for Higher Education One Dupont Circle Washington, DC

CAPITOLSCAN

Washington-based, national initiatives involving uses of telecommunications in higher education.

New Colleges Join Adult Learning Service

A record-breaking number of colleges are now using television to provide post-secondary instruction for adult learners. In both the academic and public broadcasting communities there is now widespread acceptance and utilization of television as a national delivery system for educational services.

In its first term of operation, the PBS Adult Learning Service has participation from colleges and universities and public television stations in over 40 states. This broad-based national effort already shows signs that it will continue to grow. Initial data for the winter-spring 1982 term indicates new participation from 20 public television stations and 85 colleges. These new participants add to an already impressive list of about 450 colleges and universities and 200 stations that were a part of the effort this fall.

Although it has been long assumed that a majority of colleges interested in using telecourses are community and junior colleges, the initial analysis shows just over half of the institutional users are two-year institutions. Clearly, four-year colleges are almost equally interested. The preliminary analysis also reveals that over 60% of the colleges are public controlled, while over 25% are private institutions. The size of the institutions seem to vary across the board: 40% enrolled 2,500-10,000 students; 33% enrolled under 2,500; 13% enrolled 10,000-20,000; and 5% over 20,000. More than 60% of the colleges using the PBS service are on the semester system.

While the data is not complete, it does provide a sketch of the types of institutions using the service. A national study of participants in the fall term will provide more detailed information about the ways television courses are being used locally, faculty and student attitudes, as well as a wide range of other important issues. Some aspects of that study may be available as early as March and will be reported in *TELESCAN*.

Updating other activities at PBS:

- PBS has filed applications with the FCC for ITFS frequencies that will make up the proposed National Narrowcast Network Service. (See *TELESCAN*, Volume 1, Issue 3, January/February.) In addition, the American Association of Community and Junior Colleges and the National Association of State Universities and Land-Grant Colleges have formally joined with PBS to seek funds for development of the network. The American Council on Education and other education organizations have written letters expressing support for the project.
- The PBS board has considered guidelines to make its programming available to non-public television entities in areas not served by existing PTV stations. The guidelines establish administrative, technical, and legal conditions relating to program selection and use that non-PTV entities must meet before being authorized to use the programs.

Public Radio Explores Cable Audio Market

With funds from the John and Mary Markle Foundation, National Public Radio will study the feasibility of the cable audio marketplace to provide more diverse programming to American audiences. Local public radio stations, independent producers, arts and educational institutions, and community groups are possible sources of cable audio programming. In an active cable audio market, these programs could complement several commercial syndicated cable audio services recently introduced.

Cable radio is in its early stage of development, but it may evolve in the same way as cable television. In 1977, the FCC reported that more than half of all cable systems carried the FM broadcast band. Thus, cable audio provides a better and stronger signal in many communities. Cable can increase the number of radio signals available, thereby transforming the radio medium from a scarcity of frequencies to an abundance of cable channels. In addition to providing a diversity of programming, the abundance of outlets could also resolve issues of public access for communities.

Through this study, numerous issues will be thoroughly researched to gauge the potential for cable audio: What is public radio's role as a program supplier? What kind of cable radio programming is needed and wanted by the public? How can technical problems surrounding hook-ups to radio receivers be solved? How willing is the public to support a broad range of cable radio services?

National Public Radio will analyze the most effective ways of expanding the audio marketplace so that more Americans can receive programming that will meet their special needs and interests. Further, this expanded marketplace should provide greater opportunities for artists, producers, and other professionals to create new projects and to reach new audiences.

CPB Sponsors Study of New Technologies

The Corporation for Public Broadcasting's Offices of Planning and Analysis, Communication Research, and Science and Technology are sponsoring a study to review research on the implications of the new telecommunications technologies for public broadcasting. No comprehensive review of literature currently exists nor do any individual studies analyze research in this area in the context of public telecommunications. This study, to be conducted by New York University's Interactive Telecommunications Program, seeks to fill this gap with several related analyses of the status of new technologies and their potential uses.

The study will produce a taxonomy to assist planners in understanding services that can be provided, needs that can be fulfilled, and programming that may generate revenues through the new technologies. A taxonomy of policy issues will also be developed. In addition, current distribution of several technologies (e.g. teletext, videotape, videodisc, cable) will be examined to demonstrate the extent of access of various demographic groups to these media. Social and economic factors likely to influence public access will also be identified.

Analyses will focus on who is doing what in the new technologies; areas in which new technologies are duplicating public broadcasting services; and projections of potential revenue-producing services and programming for the 1990's.

The study is expected to be completed by mid-April 1982. For further information, contact Bernadette McGuire, planning manager, Planning and Analysis, Corporation for Public Broadcasting, 1111 16th Street NW, Washington DC 20036; 202/293-6160.

Alaskan Low Power TV Receives ACSN Programs

ACSN now supplies its educational programming service to residents of 119 Alaskan communities through the first Alaskan low power transmitter system. Despite an FCC freeze on low power television station applications, Alaska was given a special license to establish its statewide system and to operate 140 low power stations.

The University of Alaska Instructional Telecommunications Consortium (UAITC) is the operating agency for the project. According to the director of media services for UAITC, the system,

when completed, will deliver instructional television to the entire state and will include every community with a population of 25 or more. Programming will include K-12, community access, and ACSN's adult-oriented education.

Other ACSN activities include three special projects in January demonstrating satellite communications technology to diverse professional audiences:

- A one-day, live interactive seminar designed for engineers as a professional development opportunity.
- A one-hour documentary on the use of video and satellite technology for the delivery of financial and other business reports aimed at college and university educators and business students.
- A presentation of *The American Library Association—The President's Program* to a national audience of librarians, public officials, and interested citizens. This two-hour, live teleconference focused on major issues facing libraries in the 80's: declining public and private funds, increasing support from all sectors, marketing strategies for libraries.

ACSN has also joined the other major cable programming services on SATCOM IIIR, the new satellite replacing SATCOM III, which disappeared in space in 1979. The launching of SATCOM IIIR and SATCOM IV represent the dramatic growth of the cable and data transmission industries, which have an increasing need for additional transponders.

Legislative Review continued from p. 1

the administration may temper its own demands; indeed, there is one theory that the draconian proposals emanating from Stockman's Office of Management and Budget (OMB) are only a stalking horse, intended to be replaced by more modest proposals as the reaction builds. While the substitute proposals are likely to call for cuts that under any other circumstances themselves would be considered outrageous, there is a very real risk that when viewed in comparison to the OMB proposals they will seem benign and therefore gain acceptance.

Regardless of the outcome, there can be no question that for the foreseeable future the funding of higher education in general, and student financial assistance in particular, will remain uncertain. The potential changes in student enrollment and financing patterns offer an opportunity for instructional telecommunications proponents to generate new support. However, it is a truism that economic plight tends to bring out the most conservative instincts in any organization, with our colleges and universities no exception to that rule. Thus, the risk to present support is real, and may pose a major challenge in the new year.

PRINTSCAN

Abstracts and bibliographies of articles appearing in periodicals from mid-November to mid-January.

Innovative Concepts

"New Technologies Best Bet for Minorities in Future, Advisory Committee Hears," *Broadcasting*, November 30, 1981, pp. 80-81.

At its first meeting in Washington in November, the FCC's Advisory Committee on Financing for Minority Opportunities heard views on what will and what won't work to increase minority representation in the telecommunications industry. The consensus seemed to be that minorities will be able to take advantage of new opportunities only if financial institutions make money available to them.

The advisory committee consists of 35 members, representing the FCC, major financial institutions, minority interests, and broadcast groups, and is chaired by FCC Commissioner Henry Rivera. Its report and recommendations are expected in April.

Among the suggestions for increased minority representation are: (1) to create strong Minority Enterprise Small Business Investment Corporations; (2) to speed up the FCC hearing process; (3) to set up a consulting mechanism for minorities considering a station purchase; and (4) to educate the financial institutions.

The opportunities within the portable cellular radio market and the cable industry are also cited.

"The State of the Revolution 1982," by Martin Koughan, *Channels*, December/January 1981/1982, pp. 23-29, 70.

Four recent developments are examined in this article as symbolic of the trend in the "telecommunications revolution" in the 1980's. They include: (1) the entry into cable by Piedmont Natural Gas, a North Carolina utility with annual revenues of $300 million; (2) the partnership formed by ABC Inc. and Group W to provide two satellite news services; (3) the publication by Sears Roebuck of a merchandise catalog in a new medium, the optical videodisc; and (4) the introduction by IBM of its first personal computer.

What makes these seemingly unrelated developments significant is that they all converge on the same instrument—the home television receiver. This means that the commonplace television set will play an even larger role in our lives by the end of the decade, as businesses become more intent on reaching consumers in a new way.

Some of the evidence of this outreach to consumers is the following: an electronic home energy management system being tested in nearly 1,000 Charlotte, North Carolina, homes; 24-hour cable news service and competition among producers for users; teleshopping, in which potential customers can access both still-frame and film sequences describing particular products available for purchase; "behaviorscan," which in essence "tracks" a consumer's viewing of commercials and subsequent purchases; and home computers for personal record-keeping, travel planning, etc.

Haefner, Klaus. **"Challenge of Information Technology to Education: The New Educational Crisis."** *T.H.E. Journal*, January 1982, pp. 47-52. An examination of the role of education in preparing students for the transfer of information processing tasks from humans to machines.

Menashian, L.S. **"Continuing Education Resources for Electronics-based High-Technology R & D Professionals: Part Two: Corporate Programs."** *Educational Technology*, December 1981, pp. 12-17. A review of programs that are part of continuing education resources and the technologies used in these programs.

O'Connell, Robert and Roger Vaughn. **"Telecommunications: Making It Work for Neighborhoods."** *PLACE*, November 1981, pp. 1-4. A discussion of the communications technologies having an impact on community development and the role of community organizations in determining public policy for telecommunications.

"WARC '79 Results: 'Creditable'." *Broadcasting*, January 11, 1982, pp. 68-69. A review of a survey on results of the World Administrative Radio Conference held in 1979 and recommendations for future U.S. policies on international telecommunications.

Legal/Regulatory Issues

"About Face on Cable Copyright." *Broadcasting*, December 7, 1981, pp. 32-33. A report on new provisions changing the agreement already approved on cable copyright.

Christopher, Maurine. **"Battle Lines Drawn Over Copyrights."** *Advertising Age*, November 16, 1981, p. 78. A commentary on the compromise plan for copyright legislation.

Cooke, Eileen. **"Off-Air Copying Update: Guidelines, Advice to Educators."** *American Libraries*, December 1981, pp. 663-664. A report on the off-air copying guidelines negotiated by copyright owners and educators.

"Copyright Amendment Survives First Test." *Broadcasting*, December 21, 1981, pp. 27-28. A report on the approval of legislation of new provisions in cable copyright agreement by House Subcommittee on Courts, Civil Liberties, and the Administration of Justice.

"Emerging Competition." *CableVision*, December 7, 1981, pp. 272-285. A review of a Senate report on the status of competition in the telecommunications industry, with an excerpt on the impact of cable on localities.

Geller, Henry. **"Putting the Lock On Cable."** *Channels*, December 1981/January 1982, pp. 61-62. A commentary on the policy issues facing the cable industry, particularly leased-channel access.

"New Educational Off-Air Taping Rights and the Television Licensing Center." *The Videoplay Report*, December 21, 1981, pp. 1-4. A review of legislation affecting off-air taping rights and the services provided by the television licensing center.

"NTIA Report Says Drop Compulsory Licensing Scheme." *Broadcasting*, December 21, 1981, pp. 44-45. A discussion of a report on cable copyright liability sponsored by the National Telecommunications and Information Administration.

"VCR/Copyright Enters Congressional Arena." *Broadcasting*, December 7, 1981, pp. 40-42. A report on testimony on proposed federal legislation that would reverse an appeals court decision on home taping.

"Video Competition." *CableVision*, November 23, 1981, pp. 135-139. An excerpt of two government reports analyzing competition in video markets.

Waz, Joe. **"Consumer Electronics and the Law."** *Access*, December 14, 1981, pp. 1-2. An examination of consumers' interest in the resolution of problems relating to new technologies and resulting from the Copyright and Communications Acts.

Research

"Closing the Gap Between Technology and the People Who Use It," by Phil Cousins, *Training and Development Journal*, December 1981, pp. 45-52.

There is a huge gap between the technologies being created and people's ability to use them. Unless the "human resources" who work with technology are developed, trained, and managed, the technology itself will be irrelevant.

Three areas of current research at Harvard University may suggest practical strategies that professionals can use to help solve some of the problems resulting from the widespread introduction of new information technologies into the work environment.

Chris Argyris' work on the ways people and organizations learn demonstrates that linear, "single-loop" patterns of thinking and problem-solving will not solve complex management and development problems. However, a more dynamic, "double-loop" response will if it involves taking an active part in understanding the people and their problems.

Anthony Oettinger's work at Harvard's Center for Information Policy Research suggests that many people may be either too scared or too angry to ask for help on the job. Human resource development professionals can help organizations deal with information-related technologies.

At the Harvard Negotiation Project, Roger Fisher and William Ury suggest solving communication problems with "principled negotiation." They suggest four steps to create new options for dealing with particular technology problems within organizations.

Broadcast Television

Bierig, Jeff. **"Low Power Television—The New Wave In Video."** *E-ITV*, January 1982, pp. 40, 42. An analysis of low power television systems and their advantages for smaller, rural communities.

Blodgett, Frank E. **"Public Television—A Fourth Commercial Network?"** *E-ITV*, December 1981, pp. 71-73. A critical view of the role of public television.

Bruckner, Huba. **"TV and Self Study Methods for the Training of Computer Professionals."** *T.H.E. Journal*, January 1982, pp. 53-54. A profile of a professional education program for computer programmers in Hungary using closed-circuit television.

Chu, James. **"Television Universities in China."** *T.H.E. Journal*, January 1982, pp. 51-52. A discussion of educational television offered by universities in China.

"CPB's Struggle For Funding." *Broadcasting*, December 21, 1981, p. 59. A report on further budget cuts at CPB and other public broadcasting organizations.

Daniels, William R. **"How to Make and Evaluate Video Models."** *Training and Development Journal*, December 1981, pp. 31-33. A guide to using television for behavior modeling training methods.

Drucker, Laurie. **"Closed-Captioning: Access for the Hearing-Impaired."** *Access*, January 1982, pp. 1-2. A description of closed-captioning and developments that may threaten widespread participation by broadcasters serving hearing-impaired audiences.

"Educational Activities at CPB." *CPB Report*, December 21, 1981, pp. 1-6. An issue devoted to the services provided by CPB's Office of Educational Activities.

Esteves, Roberto. **"Video Opens Libraries to the Deaf."** *American Libraries*, January 1982, pp. 36-38. An examination of visual techniques used by many libraries to better serve the hearing-impaired.

"Final Days at NAEB." *Broadcasting*, December 7, 1981, pp. 66-68. A report on the dissolution of the National Association of Educational Broadcasters.

Grossman, Lawrence. **"How to and How Not to, Come to the Fiscal Rescue of Public Broadcasting."** *Broadcasting*, January 4, 1982, p. 14. A commentary on alternatives to putting commercials on public television and radio stations to raise revenues for public broadcasting.

Gruebel, Jerold. **"Vincennes—A College That Can and Does."** *E-ITV*, January 1982, pp. 52-53. A profile of a college in a rural community that reaches off-campus students via television.

Hershfield, Allan. **"The National University Consortium—One Year Later."** *Change*, November/December 1981, p. 45. An examination of the pilot year of the National University Consortium.

"LPTV: Congress Tells FCC to Get On With It." *Broadcasting*, January 4, 1982, p. 31. A report on February 1st deadline for FCC to issue orders implementing low power television service.

"LPTV Reality Seen as 18 Months Away." *Broadcasting*, November 16, 1981, pp. 64-66. A review of remarks by attendees at National Translator Association convention regarding low power television licensing.

McClain, Bebe F. **"A TV System for the Visually Handicapped."** *E-ITV*, December 1981, pp. 44-49. A description of a camera system designed to aid the visually impaired.

"Pfister: Advertising No Cure-All for Ills of Public Broadcasting." *Broadcasting*, November 23, 1981, p. 65. An address by CPB's president warning broadcasters against negating the federal role while exploring new ways to raise revenues.

"Proposed Public Broadcasting Ad Test Draws Favorable Agency Response, But Questions Linger." *Television/Radio Age*, November 30, 1981, pp. 62-63, 85-88. An examination of advertising agencies' responses to the public broadcasting ad test.

"Public Radio-TV Ad Experiment Faces Problems." *Broadcasting*, December 21, 1981, p. 57. A report on delays and problems in the selection of participants in the advertising experiment.

"Public Stations' Advice Sought on Advertising Plan." *Broadcasting*, November 23, 1981, p. 65. A review of the Alternative Financing for Public Telecommunications Commission's request for comments from stations on other means of fund raising.

Smith, Reed W. **"Cooperative Buying—An Aid for Ailing Budgets."** *E·ITV*, December 1981, pp. 53-55. A profile of a university and library pooling resources for a video facility.

"The Ever-Expanding Possibilities of Video." *Broadcasting*, November 16, 1981, pp. 40-48. A description of video cameras that will compete with film technology as high-definition television standards are introduced.

Cable Television

"Cable and Congress—The Image Is Blurred," Arthur Hill, *TVC*, December 1, 1981, pp. 38-41.

As the cable industry continues to grow, its representatives in Washington encounter new problems in their appearances before legislative and regulatory bodies. This article examines the changing attitudes towards cable lobbyists.

While the cable industry has in the past been viewed in Washington as an over-regulated underdog with much credibility, today it is being challenged by cities and copyright owners. Both argue that the industry no longer needs special attention from Congress, and Congress seems to agree. In addition, the industry itself is split over the copyright issue.

The lobbying efforts of both the industry and the National League of Cities are reviewed, and the general "blurry" air of this transition period is described.

"The New Era: Refranchising Comes of Age," by Jeri Baker and Hugh Panero, *CableVision*, December 7, 1981, pp. 115-166.

Problems related to the refranchising of cable television are described in this review article. Of particular concern are (1) the increased interest of smaller communities that have been enticed by marketing campaigns directed at larger metropolitan areas, and (2) the competition at re-licensing time coupled with the expense of maintaining systems that have already been in place for 15 or 20 years.

It is suggested that in some communities, renewal gives the local governing bodies their first real opportunity to retaliate for genuine or imagined lack of service. One such case, in Boulder, Colorado, has gone all the way to the Supreme Court. Various examples of city council-cable operator conflicts are described. It is concluded that cities are going to be very aggressive in the refranchising issue, demanding new technology and expanded services.

Ball, Adrian. **"Copyright Squabbles Top Europe's Cable Problems."** *CableAge*, November 30, 1981, pp. 22-34. An examination of Western Europe's cable copyright problems.

Booth, Ethel G. **"Hayward's Award Winning Community Programming."** *TVC*, December 1, 1981, pp. 178-180. A profile of United Cable of Hayward, California, and community programming.

Booth, Ethel G. **"Valley Cable's Fresh Approach to Local Origination Pays Off."** *TVC*, December 1, 1981, pp. 82-90. A look at Valley Cable TV in San Fernando Valley, California, and its community involvement.

"Cable's Pioneers Speak Out On the Growth of the Industry." *TVC*, December 15, 1981, pp. 35-57. A discussion of the development of the cable industry by professionals with 25 years' experience.

"CATV Moving to New Heights in Its Growth." *Communications News*, January 1982, pp. 40-41. A report on the rapid expansion of the cable television industry and predictions for its future.

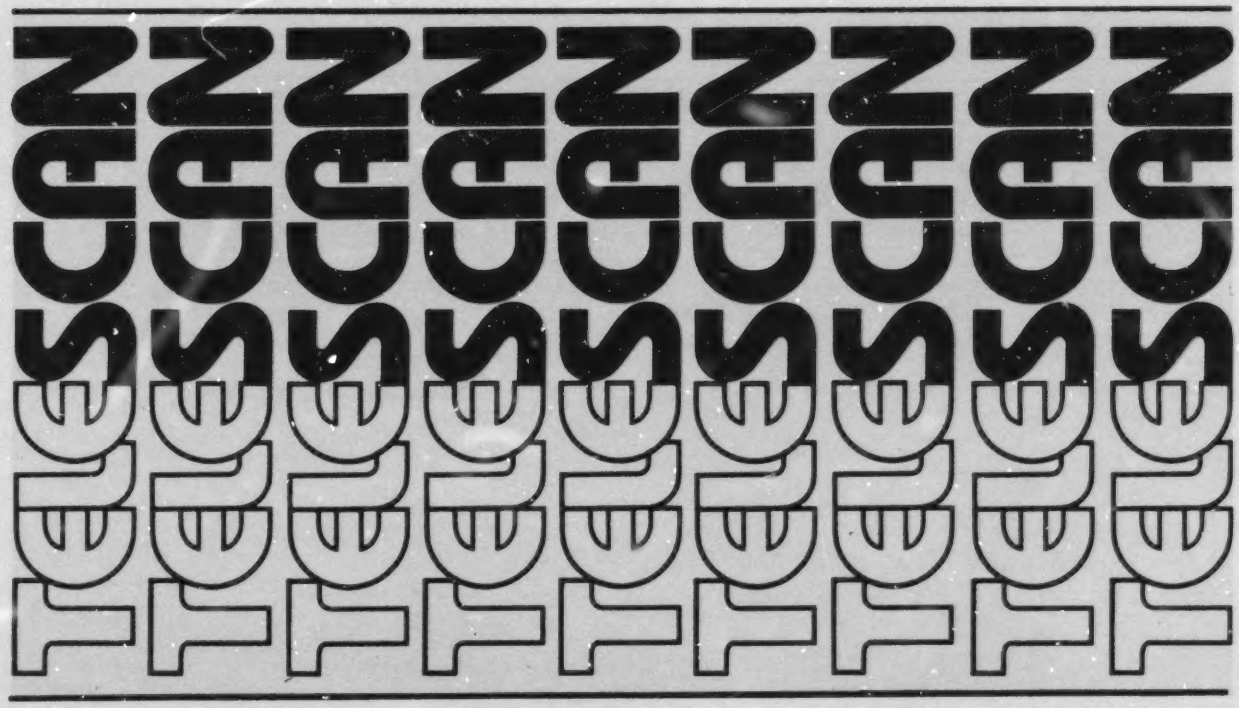
Chiaviello, Anthony. **"Gittin' Hitched! Cable TV & Business."** *Satellite Communications*, December 1981, pp. 36-43. An analysis of the future market for business cable networks linked by satellite.

Christopher, Maurine. **"Cable TV: It's Still In A Swirl."** *Advertising Age*, November 16, 1981, pp. S-1, S-22. A report on industry experimentation with cable advertising.

Christopher, Maurine. **"Papers Active in Cable Experiment."** *Advertising Age*, November 23, 1981, p. 60. A review of case histories collected on newspapers' cable experimentation

"Cities Vote for Bigger Role in Cable Regulation." *Broadcasting*, December 14, 1981, pp. 69-70. A report on the National League of Cities' vote to draft proposals protecting its membership in cable franchising negotiations.

Cohen, Fred. **"The U.S. Cable Explosion: Home Box Office and Others."** *Intermedia*, December 1981, pp. 25-27.



A look at developments in the pay cable industry in the U.S., with emphasis on HBO programming.

"Darwin's Theory Applied to Cable's Future." *Broadcasting*, December 7, 1981, pp. 70-71. A report on the CTM-Annenberg teleconference which focused on telecommunications in the 1980's.

Ellis, James E. **"Converting Cable Into Profits."** *Black Enterprise*, December 1981, pp. 76-77. A report on a minority entrepreneur in cable hardware sales.

Greenberg, Jonathan. **"Video Pirates."** *Forbes*, December 7, 1981, pp. 96-98. A discussion of cable signal thefts and the industry's efforts to halt them.

Hill, Arthur. **"Cable—The Electronic Gutenberg?"** *TVC*, November 15, 1981, pp. 54-60. A discussion of the newspaper publisher's interest in using cable to provide electronic journalism.

Hill, Arthur. **"Visions of the 80's and Beyond: Cable Contemplates the Future."** *TVC*, January 1982, pp. 56-59. An examination of factors that may affect the growth of cable, such as copyright and municipal regulation, discussed at panel sessions at the Western Cable Show.

Kaplan, Robert L. **"Local Access Lagging."** *CableVision*, December 7, 1981, pp. 35-38. A report on a survey of community access programs in California.

Lane, John D. and Mary Jo Manning. **"From Static to Success: A History."** *Advertising Age*, November 16, 1981, pp. S-2, S-6. A history of the development of cable television.

Moozakis, Chuck. **"Co-Franchising: Boon or Bane?"** *TVC*, December 1, 1981, pp. 68-77. An examination of the advantages and disadvantages of co-franchising in the cable industry.

Talend, Julie. **"Live! From Hutchinson, Minn."** *Channels*, December 1981/January 1982, pp. 53-55. A profile of local access programming in Hutchinson, Minnesota.

Trost, Mark. **"Hardware for Cable Ahead of Demand."** *Advertising Age*, November 16, 1981, pp. S-16-S-17, S-23. A report on the gap between available technology and consumer demand for the services cable can offer.

Wardwell, Douglas O. **"Providing Cable Access: A Case Study from Hartford."** *E-ITV*, January 1982, pp. 36-39. A profile of a public access coordinator's mission to initiate access programming in Hartford, Connecticut.

"Warner Releases Two-Way Cable Code of Privacy." *Broadcasting*, January 4, 1982, p. 83. A report on Warner Amex Cable Communications' attempt to address privacy concerns surrounding two-way interactive cable systems.

Teletext/Videotext

"Compatibility Is the Key to AT&T Videotext Plan." *Broadcasting*, November 23, 1981, p. 67. An announcement of videotext software developed by AT&T that would be compatible with a number of different technical standards.

Friedman, Mel. **"FCC Open Marketplace Decision on Teletext A Mixed Blessing for Technology's Proponents."** *Television/RadioAge*, November 2, 1981, pp. 41-44, 66-67. An analysis of the effects of the FCC's decision to let marketplace determine a U.S. teletext standard.

Schragge, Harmon M., Jr. **"Teletext: KPIX's Experiment."** *Broadcast Engineering*, December 1981, p. 92. A review of the first teletext experiment in the San Francisco Bay area.

"Two-Way Teletext Services—The Race Is On." *Cable Communications*, December 1981, p. 104. A review of future two-way videotext services.

Computers

"A Marriage of Convenience: Videotext and Computer-Assisted Learning," by J. W. Brahan and David Godfrey, *Computers and Education*, Vol. 6 (1982), 33-38.

Computer-assisted learning (CAL) may benefit from and be enhanced by applications of videotext technology. The Canadian-developed videotext system, Telidon, which is based on alpha-geometric graphics, has the capability of displaying a stored picture in varying degrees of resolution. It offers the potential for an effective distribution of CAL at a reasonable cost.

An experiment has been undertaken to link Telidon with the Canadian CAL

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system based on the course-authoring language NATAL (National Author Language). NATAL can be implemented on a variety of computers, allowing courseware to be created independently from the hardware. NATAL differs from PLATO in that all subscribers do not have to have the same terminal.

The addition of a link between the NATAL computer and the videotext database provides access to a large information resource for the CAL program. Micro-NATAL terminals offer further possibilities. CAL courseware can be stored in videotext frames and downloaded on demand for execution locally.

The videotext system provides a network for the widespread distribution of CAL materials as well as a large information resource in the form of a database of both reference and current (weather, financial, political, etc.) information. The NATAL-CAL system offers easier user access to the database as well as providing a new educational facility that extends the videotext service into new markets.

Allen, Brockenbrough S. **"The Video-Computer Nexus: Towards An Agenda For Instructional Development."** *Journal of Educational Technology Systems*, Vol. 10 (1981-82), 81-99. An examination of the integration of the television and computer, its effect on the development of educational software, as well as its social and economic benefits.

Cowen, Robert. **"Cottage Computing: Glorifying the Trivial?"** *Technology Review*, November/December 1981, pp. 6, 20. A commentary on the most beneficial uses for computers in the home.

Kearsley, Greg P., Michael J. Hillelsohn, and Robert J. Seidel. **"Microcomputer-Based Training in Business and Industry: Present Status and Future Prospects."** *Journal of Educational Technology Systems*, Vol. 10 (1981-82), 101-108. A report on a survey of microcomputer-based training in 56 major corporations.

Miller, Lance A. **"Natural-Language Programming: Styles, Strategies, and Contrasts."** *Perspectives in Computing*, December 1981, pp. 22-33. A review of an experiment to determine what features programming languages should include in order to be made more natural.

Plummer, O.R. **"Computer-Aided Design in Engineering Education."** *Perspectives in Computing*, December 1981, pp. 34-44. An analysis of a program using computer-aided design and manufacturing for engineering students.

Salerno, Lynn M. **"Catching Up With the Computer Revolution."** *Harvard Business Review*, November/December 1981, pp. 8-24. A review of current literature on the present and future uses of computer chips.

Smith, Peter R., ed. **"Computer-Assisted Learning. Selected Proceedings from CAL '81 Symposium."** *Computers and Education*, Vol. 6 (1982), 177 pp. A compilation of papers presented at the symposium covering hardware interaction, experimental studies, and current and future developments.

Steele, Douglas J. and Barry L. Wills. **"Microcomputer-Assisted Instruction for Musical Performance Skills."** *T.H.E. Journal*, January 1982, pp. 58-64. A description of a microcomputer-based musical instruction system for application in the teaching of performance skills.

Broadcast Radio

"NPR Going Private for Public Radio." *Broadcasting*, November 16, 1981, pp. 31-32. An announcement of NPR's funding campaign to raise revenue through private sector contributions.

"NPR Set to Sell Satellite Time." *Broadcasting*, January 11, 1982, pp. 75-76. A report on an NPR plan to sublease unused time on its satellite transponder in order to offset reduced federal funding.

"Radio: Responding to a Challenging Future." *Broadcast Engineering*, December 1981, pp. 58-64. An interview with Ralph Green, of CBS Radio, on the effects of new technologies on the radio industry.

Cable Radio

"Audio Service Packages May Shed Stepchild Status." *CableAge*, November 16, 1981, pp. 17-18, 23.

Video services with stereo capabilities may serve as a catalyst in the growth of the audio services industry. Indications are that some cable systems with formalized music packages are experiencing a significant increase in sales.

An example of the potential of the audio market is the service of United Video, which delivers cable's audio "superstation"—classical music WFMT Chicago—to some 85 systems with nearly 750,000 subscribers. United Video is considering offering its jointly owned Satellite Music Network—a service to radio stations—to cable systems in markets where no radio stations carry it.

Other companies, such as Storer Cable, have expressed some interest in the marketing of audio services but are currently taking a passive approach. One reason is the difficulties in security—preventing people from picking up the audio without subscribing.

In addition to music, there are religious services available as part of audio packages, such as those of the Moody Broadcasting Networks.

Satellites

"Rural Telecommunications via Satellite," by Jack Rosa, *Telecommunications*, November 1981, pp. 75-81.

The role of the Harris Corporation in expanding telephone and television systems in several developing countries is described by a member of the company's satellite communication division. Harris has helped establish national communication networks in Nigeria, Sudan, and Saudi Arabia. These networks illustrate the advantages of satellites to serve communication needs in rural areas.

Each of these networks used satellites for their long-distance communications and employed about 50 stations with over 4,000 channels of satellite telephone equipment. Satellites compare very favorably with other interconnect systems—land lines, high frequency radio, and terrestrial microwave—particularly in terms of speed of installation.

Satellite systems can provide a national telephone network of high quality at low cost. The same network can also be used to distribute television and radio signals.

"What Are They Doing to Direct Broadcast Satellite Services," by A. Fred Dassler, *Telecommunications*, November 1981, pp. 29-32.

The evolving commercial and business interests of direct broadcast satellite (DBS) services are summarized in terms of (1) regulatory status and policy issues, (2) likely impact on other systems, and (3) planned services (as described by the July 1981 license applicants to the FCC), and (4) potential service applications.

DBS systems must abide by several interactive tiers of regulations—those of the U.N. International Telecommunications Union, the Region Two Administrative Radio Conference convocation of Western Hemispheric countries, and the Federal Communications Commission.

The main services DBS must compete with include the cable and broadcast industries, pay television, and multipoint distribution services. Video recording devices are of lesser concern. Planned DBS services include a subscription television service directly to homes from a specially designed satellite.

The advent of DBS is likely to carry a wide range of offerings: pay TV (HBO), public TV, advertiser-supported sports, children's programs, all news- and current-events stations, religious programs, and congressional hearings. In addition, service enhancements such as closed-captioning for the hearing-impaired, stereophonic sound, teletext, and audio subchannels with a second language are likely.

Although all current DBS applicants to

the FCC are emphasizing entertainment, other uses could include educational programming for vocational training and all levels of instruction from elementary grades through graduate study.

"AID Rural Satellite Program." *Telecommunications*, January 1982, pp. 58, 74. A look at a five-year demonstration of experimental applications of satellite technology for providing service to developing nations.

"Back and Forth Over FCC and DBS." *Broadcasting*, December 21, 1981, pp. 62-63. A review of comments by broadcasters and citizen groups on authorization of interim grants for nine applicants.

"DBS Gets A Day In the House." *Broadcasting*, December 21, 1981, pp. 24-27. A review of comments given at a House Telecommunications Subcommittee hearing on DBS.

Endicott, Craig. **"A Back Yard Full of Viewing Options."** *Advertising Age*, November 16, 1981, pp. 2-8. A report on the variety of programming received by owners of satellite earth stations.

Hudson, Heather E. **"ATS-1 Celebrates 15th Birthday: A Milestone for the Pacific."** *Satellite Communications*, January 1982, pp. 22-23. A report on the first Applied Technology Satellite which is still being used for communication experiments in the Pacific.

Knudsen, Greg. **"Space-Age Technology For Age-Old Needs."** *Satellite Communications*, January 1982, pp. 24-28. A discussion of Micronesia's employment of satellite technology to improve communications.

Milmo, Sean. **"Skeptics Abound as U.K. Readies Satellite TV."** *Advertising Age*, November 16, 1981, pp. 72, 76. A report on the premier of the British satellite television service.

"Potential Nonprofit Use of DBS Studied." *Access*, December 14, 1981, p. 4. A review of a report on nonprofit uses for direct broadcast satellites.

Rudick, Marilynne. **"Putting High Hopes Into Orbit."** *Advertising Age*, November 16, 1981, p. S-20. A discussion of the availability of satellites and transponders for future cable services.

Rutkowski, A.M. **"The 1985 Space WARC Advisory Committee."** *Telecommunications*, November 1981, pp. 83-86. A description of issues regarding use of the satellite/orbit spectrum to be considered at the 1985 Space World Administrative Radio Conference.

"Satellite Deal Between U.S., Canada Criticized." *Broadcasting*, November 23, 1981, p. 67. A discussion of Canadian criticism of FCC's authorization of domestic satellites for broadcasts between the U.S. and Canada.

"Satellite Growth Shows Huge Gains Continuing." *Satellite Communications*, January 1982, pp. 30-31. A report on the growing availability of voice, video, and data communications to more users in all segments of the telecommunications industry at greatly reduced costs.

Thomas, Willard and Cinda Thomas. **"1982—The Year of the Procrastination Price."** *E-ITV*, January 1982, pp. 46-48. A review of several factors that have influenced price increases for satellite time and projections for future increases.

Teleconferencing

Garretson, Byron. **"Teleconferencing—A Systems-Engineering Opportunity."** *Telecommunications*, December 1981, pp. 87-89, 98. A discussion of the planning, engineering, and implementation of teleconferencing.

Thomas, Willard and Cinda Thomas. **"Planning A Telemeeting."** *E-ITV*, November 1981, pp. 78-79. An examination of pre-planning techniques for successful teleconferences.

Thomas, Willard and Cinda Thomas. **"Real Savings With Satellites."** *E-ITV*, December 1981, pp. 56-58. An explanation of budgeting to determine the real costs and cost-savings involved in teleconferencing.

Woolf, Mary M. **"A Telemeeting That Missed the Mark."** *E-ITV*, November 1981, pp. 71-77. A critique of a teleconference.

Copy Delivery Systems

"Space Invaders, Videodiscs, and the 'Bench Connection'," by David C. Hon, *Training and Development Journal*, December 1981, pp. 11-17.

The videodisc and microcomputer may obviate traditional training methods such as the lecture and small class instruction. New technology suggests that a dramatic turnabout is possible not only in training but in the productivity of organization people. This combination of training and information systems will make the "bench connection"; i.e., the result of training at the workbench, at the level of individual productivity.

Reasons for the failure of computer-assisted instruction and media systems are reviewed, along with the impact of Space Invader-type games on education and the "man-machine interface." These games suggest that instruction should be engaging, relevant, and involving. Similarly, the value of the videodisc stems from the premise that people should be allowed to control their own learning.

The videodisc and microcomputer combination makes it possible for people and technologists to come together. The result in a training situation is prompted cognizance, evaluated judgment progression, and pre-experience. The trainee can return to his or her "bench" with little, if any, extra transition needed.

Ebarb, Louis. **"A Production House for the Public."** *American Libraries*, December 1981, p. 692. A report on a library program which enables patrons to edit Super 8 films and ½- and ¾-inch video and audiotapes.

Josephson, Sanford. **"Consumer VCR Business Booming Despite Court Order, But Videodisc Sales Progress Is Slow."** *Television/Radio Age*, November 16, 1981, pp. 44-46, 68-69. A report comparing increased sales of videocassette recorder systems with lackluster sales of videodisc systems.

Komras, Henrietta. **"The Audio-Workbook—An Interactive Approach to Learning."** *Training and Development Journal*, December 1981, pp. 20-22. An analysis of the potential of the audio-workbook as a training tool.

Interactive Video

Schwartz, Marc D. **"Interactive Video: Tape or Disc?"** *E-ITV*, December 1981, pp. 68-69. A summary of factors to consider when selecting equipment for an interactive system.

Williams, David V. and Diane M. Gayeski. **"The Authoring Language: Your Co-Producer in Interactive Video."** *E-ITV*, December 1981, pp. 50-51. A guide for designers and producers of video programs for selecting authoring language which is most flexible.

MACROSCAN

Programs, projects, conferences, workshops, other events, and funding sources.

Teleconferencing Links Washington, Idaho, and Alaska for Cont. Ed.

Washington State University (WSU) offers professionally-approved continuing education programs for dietitians on a statewide audio teleconference network that also accommodates participants in Boise, Idaho, and multiple sites in Alaska.

Based on evaluations, over 90% of the nearly 300 participants are satisfied with the programs. Wide acceptance of the teleconferences, which are presented each fall and spring, is attributed to: (1) the content of the two-hour, evening programs, which is based on assessed needs and features university or practitioner experts; (2) speakers are oriented to the medium and are asked to prepare a timed outline that allows for discussion; (3) each program is endorsed by appropriate professional organizations, and (4) participant costs and travel are minimal because of network site accessibility.

WSU uses the 22-site Washington Educational Teleconference Network (WETNET) which has the capacity for two dial-in lines—Boise and Juneau in this case. Since Alaska has its own dedicated telephone network, Washington and Alaska sites can be bridged together with relatively clear reception in both states. Questions and discussion from Alaska and Boise are asked for separately by the speaker, to allow Washington sites to increase the volume slightly. Audio cassettes of each program are made available to those unable to attend, or placed afterwards at sites that had experienced technical difficulty. Additional information is available from Nancy Mack, coordinator, Office of Continuing University Studies, 208 Van Doren Hall, WSU, Pullman, WA 99164-52[illegible]; 509/335-3557.

Medical Rounds Broadcast Via Interactive Television

Health professionals in South Carolina have a unique opportunity: Each month they may attend grand rounds in psychiatry, family medicine, and obstetrics/gynecology presented by hospitals in four locations within the state. These busy medical professionals can interact with their colleagues for an hour of medical grand rounds through the state's live interactive broadcast system.

The Health Communications Network, Division of Continuing Education, Medical University of South Carolina in Charleston, in cooperation with South Carolina ETV, links 30 hospitals through its closed-circuit broadcast system. Five of these hospital sites have the ability to interact with both video and audio. These hospitals form the production core of the TV Grand Rounds series: Spartanburg General Hospital; Greenville General Hospital; Richland Memorial Hospital and the University of South Carolina School of Medicine in Columbia; and the Medical University of South Carolina in Charleston.

Contact Julia C.S. Keefe, TV Grand Rounds coordinator, Health Communications Network, Division of Continuing Education, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425; 803/792-4435.

Computer Conferencing Connects Kellogg Fellows

For the past year, participants in the W.K. Kellogg Foundation national fellowship program who are located at higher education institutions across the country have been using a computer conferencing system to exchange information.

Computer conferencing is an electronic message switching system that links a group of participants in an electronic "meeting." Discussions in computer conferences have a number of characteristics that distinguish them from video and teleconferencing interactions. In computer conferencing, all communication must be entered via keyboard. The information is stored in a central computer until the intended recipient signs on to the system to read it.

Entries may be public items for everyone in the conference, or they may be private messages transmitted to selected recipients only. Recipients may comment on public items, and the discussion continues much as it would in any meeting. However, those involved in the conference are never connected simultaneously or directly. Each fellow works at his or her own pace. Public items are categorized into agenda topics and may be cross-referenced for ease of recall. Each item is keyed, and therefore a complete transcript of the discussion is available at all times.

Fellows use the TELENET communications network and computer terminals available at their home institutions. They also have direct access via phone to the Merit Computer Network (a three-computer network with machines at Wayne State University, University of Michigan, and Michigan State University). CONFER, the computer conferencing system developed by Robert Parnes and maintained by Advertel, Inc. is being used for this project.

The Kellogg project started 12 months ago and is scheduled to run through June, 1983. Of the 40 fellows in the first class, 16 have become members of the conference and communicate on a regular basis—1 to 2 times a week. Topics of discussion include the exchange of bibliographic references and dates for upcoming conferences, ideas for research projects, personal anecdotes, coordination of travel schedules, and reactions to the fellows' semi-annual seminars. Over half of the participants have had no prior experience with computing.

For more information contact Richard B. Heydinger, assistant to the vice president for academic affairs, University of Minnesota, 216 Morrill Hall, 100 Church Street SE, Minneapolis, MN 55455; 612/373-2495.

Project Underway to Study Two-Way Videotext System

Under a grant from the Corporation for Public Broadcasting, KPBS-TV15, and San Diego State University's Center for Communications are developing a pilot program for two-way cable television. Projected to start in early 1982, the program will use Cox Cable's new interactive videotext system, INDAX. The purpose of this pioneering effort is to examine the prospects of this technology for both public broadcasting and education.

Interactive videotext allows the viewer to interact with a central computer through the use of a cable converter and a keypad. These systems may be used for a variety of functions including learning, testing, and information retrieval.

For the project, KPBS-TV will develop and produce an interactive program based on an informal telecourse for senior citizens which was broadcast by TV15 and prepared by the Televised Educational Growth Opportunities project (TEGO). Educational analysis of the new experiment, as well as consumer liaison, will be handled by TEGO. San Diego State's Center for Communications will be responsible for the evaluation of the project which will focus on the potential and future development of interactive videotext.

For further information contact Kathleen Goodfriend, coordinator of telecommunications, KPBS-TV, San Diego State University, San Diego CA 92182; 714/265-4157.

National Science Foundation Funds Technology Projects

The Office of Science and Society at the National Science Foundation responds to the problems arising out of the changing relationship between the scientific and technological communities and the larger society. The general purpose of the office is to bring about public and professional awareness of this relationship and help solve important ethical and social issues connected with science and technology.

The Ethics and Values in Society and Technology (EVIST) program is one of three programs sponsored by the Office of Science and Society to approach such issues. EVIST focuses on identifying, understanding, and helping to resolve the ethical and social dilemmas that confront the conduct of scientific and technological activities. The program supports projects to assess the effects of new technologies with the primary objective of exploring issues that arise in the work of scientists and engineers and in their interactions with citizens affected by their work.

Closing dates for preliminary proposals each year are: May 1, September 1, January 2; for formal proposals: April 1, August 1, and December 1. Program announcements with guidelines for submitting proposals are available from the Office of Science and Society, National Science Foundation, Washington, DC 20550.

Researchers Use Cable To Evaluate Telecourses

Research and evaluation staff at the University of Mid-America (UMA) have used a variety of techniques to evaluate telecourses, including satellite delivery of program rough cuts for faculty review and storyboard mock-ups at script stage for local reviewers.

Most recently, UMA has explored the use of cable technology for evaluations. The local public access cable channel in Lincoln cooperates in the experiment. They provide free air time on request for rough cut videotape material (rough edited work prints with no open or close, and only portions of the sound track).

Cable delivery offers a close approximation to actual distance student study conditions. The more typical evaluation procedure of grouped reviewers assembled at a single location lacks similarity with course-related viewing circumstances. Thus, using a system of delivery into the home increases the validity and value of the findings.

UMA has worked with Lincoln Cablevision to deliver programs for three different evaluation projects locally: courses

SOURCESCAN

Books, research papers, and occasional papers with information on how to obtain the publications.

A New University for a New Century, produced by Temple University Faculty Seminar. Available from Herman Niebuhr, Jr., Office of the President, Temple University [Philadelphia, PA 19122; 205/787-7777].

A 30-minute videotape on the problems of and prospects for American higher education. The deepening crisis confronting higher education is explored through commentary on its components. The solution to the crisis as proposed is a once-in-a-century update of the higher education paradigm.

Alternate Media Center Publications List, Alternate Media Center, New York University School of the Arts [725 Broadway, New York, NY 10003]. 1981. 8 pp. Free.

A list of publications available from the Alternate Media Center and its Interactive Telecommunications Program that includes official reports to the program's sponsoring agency as well as research papers. Information on how to obtain the publications is provided.

Apple Computer Education Software Directory, by WIDL Video. Visual Materials Incorporated [4170 Grove Avenue, Gurnee, IL 60031; 312/249-1710]. 1981. 125 pp. $9.95, plus $2 shipping.

A guide to software programs for the Apple II computer. This directory lists 19 subject categories for elementary through college-level programs, identifying names and addresses of producers.

Communications Satellites: The Canadian Experience, by Lyse D. Helsing. Canadian Embassy, Public Affairs Division [1771 N Street NW, Washington, DC 20036; 202/785-1400]. 1980. 12 pp. Free.

A report on the development of Canadian satellite technology. This brochure describes the operation of the Canadian domestic communications-satellite system, as well as Canadian and U.S experimentation, and satellite projects for the future.

Communications: The Canadian Experience, Canadian Embassy, Public Affairs Division [1771 N Street NW, Washington, DC 20036; 202/785-1400].

A review of Canadian communications technologies that are having a global impact on the information revolution. The brochure focuses on videotext, optical fibers, telegraphy, telephony, and radio and television broadcasting.

Information Technology in Education: Perspectives and Potentials, by the Congressional Research Service. Available from the House Committee on Science and Technology [House Annex #2, Room H2-155, 3rd & D Streets SW, Washington, DC 20515]. 1981. 346 pp. Free; limited copies available.

A comprehensive collection of materials relating to information technology and education. This book includes conclusions and recommendations of the Subcommittee on Science, Research and Technology, a list of salient Congressional activities from 1969 to 1980, plus 21 appendices.

1982 Cassette Catalogue, National Public Radio [2025 M Street NW, Washington, DC 20036; 202/822-2000]. 1981. 103 pp. Free.

A listing of over 200 new educational, cultural, and informational programs available on audio cassettes.

Telecommunications Demonstration Project, U.S. Department of Education, Division of Educational Technology, Educational Technology and Policy Development Branch [400 Maryland Avenue SW, Washington, DC 20202]. 15 pp. 1981. Free.

A listing of grants awarded through the Telecommunications Demonstration Program with descriptions of projects, populations served, duration, and grant amount. Awards cover a wide range of technologies used to deliver instruction: teletext, electronic mail, interactive cable, telephone/computer networks, and slow scan television.

Videotext and Education: A Review of British Developments, by Michael R. Reel. The Center for Communications, San Diego State University [San Diego, CA 92182]. 1981. 18 pp. $3.

A review of British projects involving educational uses of various videotext technologies. This report provides several case studies of British experiments and includes definitions of the terms "teletext" and "viewdata."

Viewtext '81: International Viewdata Markets and Applications, Conference Digest From the Exposition in Washington, D.C. on April 23-24, 1981, Information Gatekeepers [167 Corey Road, Brookline, MA 02146]. 1981. 85 pp. $50 in U.S. $60 Foreign.

Nine in-depth presentations of industry evaluations and predictions for the future of videotext developments.

in classroom discipline, in accounting, and a three-program series on child abuse prevention. In the latter, materials were intended for delivery in two distinct settings: open broadcast to viewing parents in their homes, and videocassette or film to parents in assembled workshop settings where they could view and discuss programs.

Rough cut reviews were accomplished by taking videotapes and recorders into the field. At-home reviewing, however, was particularly well-suited to the use of cable. Evaluators recruited 15 parents who had been identified as Cablevision subscribers and who agreed to watch the programs and respond to a questionnaire. In addition, participants were asked to review three print brochures designed for distribution to parents from the local public television station upon request. All but two of the parents responded to the questionnaires.

UMA evaluators are convinced of the efficiency and effectiveness of this means of review for eliciting information. In many instances questionnaires may be supplemented or supplanted by telephone interviews. Turnaround time, availability of staff interviewers, and depth of response requirements are all factors that must be considered in order to determine the best way to use cable as a resource. For more information contact, Milan Wall, vice president, UMA, P.O. Box 82006, Lincoln, NE 68501.

Rural Satellite Program Specializes in Information on Communications Satellites

A resource collection of some 1,200 documents on communications satellite applications has been assembled and catalogued by the Agency for International Development's Rural Satellite Program staff. The collection is the primary resource for the program's technical information service, which answers specific research questions on request; serves the research and planning needs of the program's staff; and focuses on applications of satellite technology for the delivery of social services in isolated rural areas of the developing world.

A cross-indexed, manual card-file system gives the library user easy access to the materials, which range from the technical aspects of satellites, planning projects, and using satellite systems for public service applications (such as distance education), to documents describing demonstrations and projects that have used satellite systems for public service.

Inquiries about the library may be addressed to Sandra Lauffer, information manager, AID Rural Satellite Program, 1414 22nd St. NW, Washington, DC 20037; 202/862-3855.

College Earth Station Offers National Teleconferences

Burlington County Community College (BCC) is the first college in the state of New Jersey to have a satellite earth station. A saucer-shaped dish mounted on a 20-foot tower allows BCC to receive national conferences via satellite. The new earth station offers industry, legal, military, medical, vocational, and educational groups a variety of programs sponsored by the Public Service Satellite Consortium. The station is located on the BCC Pemberton Campus, 35 miles from Philadelphia, and 25 miles from Trenton.

The first program received by satellite featured the latest technology in library services, sponsored by the American Library Association in Denver. Other programs for the future will include the American Association of Radiologists, the American Hospital Network, and various corporate-sponsored networks.

BBC's teleconferences offer participating organizations the option of transmitting voices by telephone from the college's headquarters to the national program site. Burlington County College serves as the Tri-State (Pennsylvania, New Jersey, Delaware) teleconference headquarters, providing all the necessary accommodations such as scheduling, hotel arrangements, transportation, and setting up technical equipment.

In the future, the earth station will offer students college credit courses from various educational institutions throughout the U.S.

For further details concerning the types of vocational programming, teleconferences, or registration procedures, write or call Burlington County College, Division of Learning Resources, Pemberton-Browns Mills Road, Pemberton, NJ 08068; 609/894-9311, ext. 201/202.

Michigan State Sponsors Cable Teleconference

On December 3, 1981, cable television audiences in Michigan viewed a teleconference on the state's taxation system featuring public policy specialists, economists, and state agency tax experts. The cooperative venture was sponsored by Michigan State University Lifelong Education Programs, United Cable Television of Mid-Michigan, Home Box Office, MSU Instructional and Public Television, and local cable television systems.

The two and one-half hour program was made available to audiences on three levels. Local civic leaders and government officials were able to view the program and ask questions via telephone at 10 selected sites; at county sites, clientele of the MSU Extension Cooperative Service saw the program and conducted group discussions; and cable subscribers were able to view on their HBO channel, public channel, or CATV system.

The Statewide Taxation Education Program is the prelude to a massive educational program to help residents understand and to help promote intelligent change in the state's tax system. As the first educational venture of its kind in Michigan, STEP has demonstrated the capacity of cable television as a teaching and public service instrument.

A 3/4" videotape documenting the program is available from Dave Brown, telecommunications coordinator, Extension Resource Information, Michigan State University, Agriculture Hall, East Lansing, MI 48824.

West Virginians Earn College Credit Through Statewide Telecourses

In West Virginia, increasing numbers of state residents have extended the pursuit of college degrees beyond the traditional classroom setting through televised courses. The catalyst for West Virginia's telecourse success has been the state Board of Regents, the governing body for all public colleges and universities. During the early 70's, the board recognized the potential of television-based learning, and closely monitored a growing academic interest in televised course delivery.

Several developments led the academic community to see how the state's rural population could be effectively reached via public television: proposals of joint promotion campaigns by the state's three public television stations and cost-sharing by institutions to acquire telecourse materials; an influx of small community cable systems; and the addition of translators to improve PTV reception. In the fall of 1976, the Board of Regents authorized a proposal to support a statewide college credit program.

Thus began the West Virginia Higher Education Instructional Television Project (HEITV). WWVU-TV, a licensee of the board and one of the state's three public television stations, coordinates the project, directing the aquisition of programs, distribution of print materials, preparation of promotional campaigns, and development of activities for participating schools. A high level of commitment from each institution and each station has contributed to the success of the project. Faculty throughout the state annually preview and recommend telecourse materials for statewide broadcast. Colleges and universities involved have appointed coordinators for activities such as faculty previewing, student registration, and promotion. Each station assigns staff members to direct broadcast

scheduling, program recording, and previewing.

All leasing and student fees, videotape purchases, and statewide promotion costs are paid from the HEITV fund. The model continues to be a successful one: in four and a half years it has offered 56 courses and has accumulated 10,875 enrollments.

For more materials detailing HEITV, contact Kathy Channell, adult learning specialist, WWVU-TV, P.O. Box TV-24, Morgantown, WV 26507-0897; 304/293-6511.

The following periodicals were reviewed for this issue of *TELESCAN*, but do not appear in our original list of publications:

Black Enterprise
Earl G. Graves Publishing Co.

PLACE
Partners for Livable Places

Training and Development Journal
American Society for Training and Development

Contributors

Contributors to this issue of TELESCAN are listed below. The efforts of these individuals have been critical to our monitoring activities. ***We urge those of you who wish to become part of this important information network to submit to TELESCAN items of potential interest to our broadly based audience.***

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WWVU-TV

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U.S. Department of Education

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TELESCAN

MAY/JUNE 1982

The Digest of the Center for Learning and Telecommunications VOLUME 1 ISSUE 5

Six Receive Annenberg Awards/ Fleming Comments

In February 1982, the project council of the CPB/ASC Project authorized negotiations for approximately $5 million in contracts to six finalists. Many of these projects will be required to secure co-funding in addition to the awards made by the Annenberg council.

Fifty-four reviewers assisted project staff in reviewing the 227 proposals received last November. Commenting on this first round of funding, Robben Fleming, former interim director of the project said, "That we funded only three percent of the proposals is a clear indication of how stiff the competition was. There were many projects which were worthy and needed in their geographic area. However, many involved either the use of a well-known and well-understood technology which could not demonstrate anything new, or they were of primary interest to a given locale and unlikely to be adopted elsewhere. Given the limited funds available, reviewers and staff felt that such projects could not be funded. It is likely that such an attitude will prevail in the future."

Additionally, Fleming commented, "Many projects called for the purchase of equipment which would outlive the particular project. Such equipment would certainly benefit the proposing organization and make it more productive in its day-to-day operation. On the other hand, there would be no stopping point if this practice was started and the ultimate goals of the project could not be attained if the funds were used in this fashion."

The six projects selected are:

- A telecourse in English composition and rhetoric, and an introduction to computers leading to associate and baccalaureate degrees by a consortium of community colleges.
- A telecourse in introductory physics by the California Institute of Technology.
- A telecourse on the U.S. Congress from WETA-TV and the American Political Science Association (Washington, D.C.).
- A telecourse in introductory physiological psychology by WNET-TV (New York) and W.H. Freeman, an affiliate of *Scientific American*.
- Audio and radio components for baccalaureate correspondence courses offered by a consortium of Big Ten Universities and the University of Chicago.
- A demonstration and test of interactive videodisc instruction in physics, chemistry, and biology at the University of Nebraska-Lincoln.

Final commitments and funding levels are contingent on satisfactory conclusion of negotiation of budget, scope of work, and other contractual arrangements. Additional information will appear in *TELESCAN* when negotiations are completed.

In addition to the announcement of the Annenberg awards, CPB's Board of Directors named Douglas Bodwell as director of the education division, with responsibility for the CPB/ASC Project as well as other educational initiatives. Bodwell had been serving as the deputy director of the project since March, 1981, and as the Corporation's director of educational activities since 1974.

In this issue . . .

Former CPB/ASC interim director Robben Fleming comments on proposals ..... **page 1**

Three teleconferences promote Adult Learning Service ..... **page 2**

Facilities Grant Program downgrades instruction, by Michael Goldstein and Kenneth Salomon ..... **page 3**

Bibliography covers 120 articles on current developments in technologies ..... **page 4**

Books, reports, and a videotape offer resources for using telecommunications ..... **page 8**

Computer applications for disabled focus of Johns Hopkins search ... **page 11**

Expanded ITFS network planned for South Carolina ETV ..... **page 11**

SPECIAL OFFER!!

TELESCAN Charter Subscribers receive discount on renewals for the 1982-83 volume. See page 5 for details.

The Center is a program of the American Association for Higher Education One Dupont Circle Washington, DC

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Washington-based, national initiatives involving uses of telecommunications in higher education.

New Committee Formed on Computing and Higher Ed.

The Executive Committee of the National Association of State Universities and Land-Grant Colleges, at its February meeting, created an education and technology committee to address issues of computing and higher education. Among the issues the committee intends to examine are the training and updating of faculty in the use of computing, computer literacy of students, mechanisms for transferring technology from universities to other elements of society, and joint endeavors with industry.

Robert G. Gillespie, vice provost for computing at the University of Washington-Seattle, and a member of the committee, created the groundwork for the committee's efforts through his study "Computing and Higher Education: An Accidental Revolution" funded by the National Science Foundation (See *TELESCAN* Volume 1, Issue 2). Chairing the new committee will be Irving Shain, chancellor, University of Wisconsin-Madison and chairman of the Panel on Computing and Higher Education.

For further information, contact Susan Fratkin, director, Special Programs, National Association of State Universities and Land-Grant Colleges, One Dupont Circle, Washington, D.C. 20036; 202/293-7120.

207 Proposals Request Funds for Projects in Telecommunications

The Fund for the Improvement of Postsecondary Education has received 207 preliminary proposals for projects in telecommunications—out of a total of 2246 proposals submitted—to be funded in 1982-83. This year's proposals indicate that educators increasingly realize that reaching more learners through telecommunications is not the whole story. The proposals received reflect this concern with a full range of elements needed for effective educational systems. Divided into categories, the projects focused on the following areas:

- Use of videotapes for course content (122 proposals).
- Use of telecommunications primarily as a delivery system (41 proposals).
- Other aspects of course implementation (44 proposals). This includes faculty development; learner support services; assessment, evaluation, and accreditation; production process; training for use of systems.

Also of importance are the number of projects that use the visual medium to convey math and science concepts. However, two areas are not yet adequately represented; the use of radio and audiotapes, and projects to build interpretative and listening skills.

Following evaluation, 30 of the 207 preliminary proposals in telecommunications were invited to submit full proposals on March 9. All of the above categories are represented by at least one of the final proposals. The Fund expects to make final grant decisions in July. Announcement of those awards will appear in *TELESCAN*.

Task Force Studies Audio Course Distribution System

The Office of Education Services at NPR has established an Adult Learning Task Force to develop policy issues relating to the potential of a central system for the distribution of adult education audio courses. The group comprises eight individuals representing the academic community, NPR stations, and consortia, who will complete a feasibility study and provide recommendations for a broadcast and/or non-broadcast system for postsecondary audio materials.

Inquiries should be directed to Brian Brightly, director of education services, NPR, 2025 M Street NW, Washington, DC 20036.

Fall Telecourse Schedule/ Medicare Teleconference Available from ACSN

ACSN has announced its preliminary schedule of telecourse offerings for the 1982-83 academic year. The early announcement of the schedule enables participating institutions to begin planning and promotion efforts well in advance of student registration time. Nonparticipating institutions can now review ACSN programming prior to summer recess and make plans to join the network by the fall 1982 term. Complete information about the 1982-83 schedule is available from Frank Peto at ACSN.

In May, 1982, a nationwide audience of hospital administrators viewed "Medicare Strategies and Issues," a teleconference presented by the Appalachian Community Service Network. The program dealt with current issues in Medicare regulations and their impact on health care reimbursement, and featured health care finance and regulation specialists from Touche Ross & Co., a national accounting firm.

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Two separate video segments made up the program, each offering an opportunity for viewers to telephone questions to the panel assembled in the studio. The success of the teleconference and the current importance of the issues addressed have prompted hospital professionals to request further distribution of the program. Therefore, ACSN has edited the two and one-half hour video segments into a single videocassette version that is available for purchase.

For information on "Medicare Strategies and Issues" and other special audience programming available through ACSN, call 202/331-8100.

Teleconferences Promote Adult Learning Telecourses

To stimulate a national exchange of ideas on instructional television for adults, the Public Broadcasting Service offered three teleconferences this spring. Hundreds of educators and broadcasters participated at viewing sites provided by PTV stations.

The first teleconference, in mid-March, focused on a course in the humanities. Presentations by faculty and administrators about effective utilization of the series included topics such as credit and non-credit applications, unique adaptations for the visually- and hearing-impaired, and strategies for successful marketing and promotion. A live question and answer period between local participants and a panel of faculty, administrators, and others knowledgeable about the series followed the presentations.

This experimental teleconference provided an in-depth examination of one series rather than a full schedule of courses, an approach that is being evaluated for its effectiveness and value to colleges and stations.

Promotional strategies, critical to attracting and enrolling students in TV courses, was the subject of a second teleconference on April 15. Station and college representatives had an opportunity to hear from their colleagues about experiences in promoting adult learning. Expert advice was offered by marketing and promotion specialists, and participants were able to interact with panelists in discussions.

A further boost to local promotion efforts was the teleconference on Learning By Viewing, a project funded by the Fund for the Improvement of Postsecondary Education and produced by PTV station WETA in Washington, D.C. The project is designed to increase awareness of local telecourse opportunities and to

provide potential students with the information they need on course registration, tuition, and academic requirements. The teleconference presented the components of the project—a half-hour TV program, print and promotional materials, and details on how to implement a telecourse hotline. Representatives of WETA and colleges that participated in a pilot effort described their experiences and demonstrated how the elements of the project can be used effectively in other communities.

The Learning By Viewing program was fed for preview and taping during the teleconference and can be used free of charge by colleges and stations to promote their own adult learning initiatives. Colleges participating in the teleconference received print materials developed for the project as well as background information and recommendations for local adaptations.

For further information, contact your local public television station or the PBS Adult Learning Department at 202/488-5360.

Videoconferencing Assessed for Public Broadcasting

As part of its ADVENT (Analysis of Diversification Ventures and Examination of New Technologies) Project, the Corporation for Public Broadcasting has undertaken an analysis of the demand and income potential of teleconferencing for the public broadcasting system. The study, prepared by the consulting firm of Browne, Bortz, and Coddington of Denver, addresses several important questions such as: How large is the videoconferencing market? Who are the major service providers that will compete with public broadcasters? What are the important costs and prices? What can be done to enhance public broadcasting's competitive market position?

The study concluded that public broadcasting stations, while best equipped to provide a one-way teleconference service, cannot depend on such a service to be a major source of revenue before 1985. It also points out that public broadcasting can participate in the growing videoconferencing market with minor up-front costs. Such an opportunity for low-cost entry into the market gives public broadcasting a particular advantage to capitalize on the market as it develops.

The final report provides an overview and economic analysis of the industry, including cost and price data, and revenue projections for public broadcasting.

For further information contact Steve Symonds, director, Policy & Administration, CPB, 1111 16th Street NW, Washington, DC 20036; 202/293-6160.

LEGISLATIVE REVIEW

Reports on legal issues affecting higher education's use of telecommunications for instruction.

New Priorities For Public Telecommunications Grant Program Downgrade Instructional Uses

by Michael B. Goldstein and Kenneth D. Salomon

(Editor's Note: Mr. Salomon was formerly deputy chief counsel of the National Telecommunications and Information Administration.)

The National Telecommunications and Information Administration has adopted new funding priorities for its Public Telecommunications Facilities Program (PTFP) that emphasize replacement of obsolete and worn out equipment of existing public broadcasting stations. As competition for ever more scarce federal support intensifies, this change is welcome news for the stations. For some in the instructional telecommunications field, however, this new set of priorities represents a sudden reversal of a policy that, albeit briefly, seemed directed towards encouraging the establishment of alternative delivery systems emphasizing instructional services.

The first PTFP priority remains bringing ("extending") a first public television or radio signal to an unserved area. (NTIA estimates that public television can be received by 94 percent of the country and that public radio can be received by 74 percent. The Corporation for Public Broadcasting places television and radio coverage at 90 percent and 65 percent, respectively.) In a major break with policy over the past three years NTIA has elevated replacement of basic equipment from the third to the second priority. The real importance of this change is not the fact that replacement has climbed one priority. Rather, it is the fact that existing stations will compete for a much greater portion of PTFP funds. As a result, the chances of being awarded a grant to replace worn out equipment is greater than any time in the last three years.

The converse, however, is also true: providers of what have come to be known as "significantly different additional services," since 1979 the *second* priority for PTFP funding, now fall into the "Other Cases" category, without any priority designation whatsoever! The elimination of this class of applications from the priority list means that applicants for, as an example, an instructional UHF or low-power facility to supplement an *existing* public television station, will have to convince the PTFP staff that they should be funded "by virtue of their unique or innovative nature" *and* that such federal support "would further the overall objectives of the [Public Telecommunications] Act."

Along with this new standard, there remains the requirement of demonstrating "a clear and substantial community need" for the service. Finally, the "Other Cases" category includes, along with instructional service, such competing claims as the first in-state facility with local origination capacity (as contrasted with first local origination capacity serving the community but located across the state line), service to identifiable ethnic or linguistic minority audiences, and services to the blind or deaf, *and* electronic text, among others. In its announcement of the new priorities, NTIA gives short-shrift to the elimination of the old Priority II, noting only that it "will retain the discretion to fund applications in this category without regard to its consideration of applications within other priorities."

In the PTFP authorizing legislation, Congress directed that "not less than 75 percent" of grant funds are to be available to "extend delivery" of public broadcasting programs to unserved areas. Because NTIA now "believes that it must maintain public [broadcasting] services where they presently exist" as part of its primary obligation to "extend" coverage to unserved areas, existing stations that need to replace basic equipment will compete for 75 rather than 25 percent of the PTFP dollars. The change stems from NTIA's conclusion that "it is more important and economical" to maintain and augment an existing station's equipment than to plan and construct additional facilities.

The effect of this change in priority designation is likely to be a significant shift in the support of so-called "second service" projects, many of which were supported, at least for planning efforts, during the last two rounds. Those projects that can demonstrate a unique set of characteristics or an innovative use of a particular telecommunications technology seem to remain competitive. However, a proposal that seeks to *replicate* an innovative approach already attempted elsewhere would apparently not be well received, even if it could demonstrate overwhelming community need. Thus, projects utilizing sub-carriers, low-power TV, microwave, and cable, as well

as full-service but secondary radio and TV, will be hardpressed to meet this new funding standard. The impact on instructional telecommunications, a frequent user of these so-called secondary services, is clear: Federal interest has shifted away from reaching the *under*served to assuring that the *primary* service continues to operate. This is not necessarily, of itself, an improper policy, and given the limited resources may even represent the highest use of the available funds. But its probable effect in diverting federal funds away from the development of instructional (and other) second services should be manifest.

The new arrangement of priorities, despite its obvious downgrading of supplemental services for instructional purposes, may hold a kernel of benefit for those interested in instructional telecommunications. The 1981 Amendments to the Public Telecommunications Financing Act sought to encourage public broadcasters to develop new (nonfederal) ways of generating revenue. Following the Congressional mandate, NTIA has amended its rules to make it easier for PTFP grantees to use equipment acquired under the program in a revenue generating setting. Thus, so long as the commercial use does not interfere with the station's primary obligation to provide public broadcasting services, PTFP grantees will have far more flexibility to enter into agreements with other commercial entities for the use of facilities and joint development of projects.

With growing commercial interest in instructional telecommunications, particularly at the postsecondary and adult levels and especially in the increasingly lucrative area of professional relicensure, the opportunity for joint enterprises, with the public broadcaster benefitting economically from the arrangement, is greatly enhanced. The net effect of this change may be to allow public telecommunications entities to become more involved in the broad spectrum of instructional activities, in the name of improving their funding base.

Of course, the attractiveness of the new priorities for existing public radio and television stations may itself be either short-lived or altogether illusory. While a rescission of funds for the current award year is unlikely to be approved by the Congress, and even though PTFP is authorized through fiscal year 1984, the president has requested no funds for the program in his fiscal year 1983 budget. It is possible, therefore, that 1982 may be the last year for the small and uniquely successful PTFP. After the pending round of grants, it is possible that public broadcasters, for the first time since 1962, may have no source of federal support for purchases of basic equipment other than dwindling CPB funds.

PRINTSCAN

Abstracts and bibliographies of articles appearing in periodicals from January 15 through March 15.

Innovative Concepts

"Teaching with Hardware: Educational Technology at CUNY," by Joan Baum, *PSCcuny Clarion,* February 1982, pp. 1, 7-10.

Although technology has been used for a long time by administrators and other staff at the City University of New York, it is only recently that the use of computers and television for instruction has spread. However, faculty are not really aware of what is in use in areas other than their own, and there is debate about the value and implications of educational technology at CUNY.

Most faculty do not see computers as a threat at all; in fact, more are getting involved. There are now about 250 microcomputers at the various colleges, and the number is predicted to reach 2,000 in three to five years. One problem for the future will be finding qualified teachers for today's students who are becoming "computer literate" in elementary school. Teaching salaries cannot compete with industry, and computer experts are being lured away from higher education. To compound the problem, computer science has become the largest department on campus.

Besides computers, the use of audio/visual materials and telecourses has grown extensively. Again, A/V departments vary from campus to campus. Plans are underway for expanding A/V services, including televised instruction in the classroom, and such projects as Queens' short interview segments for WNYC's "News from City Hall" program. CUNY directors have also organized into the Consortium of Educational Communication and Technology. Although a series of telecourses is offered, CUNY is currently acting as a "second-hand distributor." The telecourses are being carefully monitored to assess their efficiency and use as a recruitment tool.

Barber, Benjamin. **"The Second American Revolution."** *Channels,* February/March 1982, pp. 21-25, 62. An analysis of the effects of new technologies on the American democratic system.

Dymmel, Michael D. **"Reacting to New Technology: The Communications Industry."** *VocEd,* January/February 1982, pp. 41-43. A look at the occupational effects of new technologies.

Gies, Joseph. **"Technology: A New Liberal Art?"** *AGB Reports,* January/February 1982, pp. 17-20. A discussion of the need for technology literacy, and universities that offer courses on the role of technology in society.

Martin, Marion. **"The Information Revolution."** *American,* Winter 1982, pp. 10-11, 17. A view of the impact of technological change on organizations and society.

"Misguided Policies." *CableVision,* February 22, 1982, p. 74. An argument for the U.S. to give greater priority to the development of the telecommunications industry in order to maintain economic world leadership.

Orvell, Miles. **"The Screen Revolution."** *Technology Review,* February/March 1982, pp. 40-46. A commentary on the social effects of new communications technologies as envisioned by Marshall McLuhan.

Saito, Yoshio. **"Theory vs. 'Real Life' Instructional Media Design: A Primer for Those New to the Field."** *T.H.E. Journal,* February 1982, pp. 53-54. A discussion of the conflict between instructional media design theory and practice at higher education institutions.

Schwarz, Michael et al. **"A New World."** *Channels,* February/March 1982, pp. 26-32. An examination of how new technologies will affect areas such as agriculture, real estate, filmmaking, finances, and disabled persons.

"Times Mirror's Erburu: Gearing Up for the Information Age." *Broadcasting,* March 8, 1982, pp. 106-110. A profile of Times Mirror Co. and its investments in emerging media technologies.

Legal/Regulatory Issues

"Cable: It Can't Lose for Winning." *Broadcasting,* January 18, 1982, pp. 27-29. A review of three legal developments affecting cable.

Troost, F. William. **"New Copyright Developments."** *E·ITV,* February 1982, pp. 37-38. An analysis of three developments in copyright regulations and their implications for educators.

Broadcast Television

"Consortia—A Growing Trend in Educational Programming," by James Zigerell, *E·ITV,* February 1982, pp. 43-47.

Two- and four-year institutions are becoming more interested in consortia due to a need to share resources, make projects or procedures economically feasible, and to encourage use of telecommunications-based instructional materials. Especially among community colleges, telecommunications consortia are becoming more prominent at both the local and regional level.

Examples are the public community colleges of the states of Florida and Washington, which have organized to negotiate for the acquisition and broadcast of television and radio courses by PTV stations and cable systems on a statewide basis. Others include the Eastern Educational Consortium in California, and the National University Consortium, which operates out of the University of Maryland-College Park.

Both formally and informally organized, consortia can guide institutions in using media-based materials to reach and recruit new students. Some consortia have been successful in obtaining grants to support special projects.

Nationally-based consortia, such as the Instructional Telecommunications Consortia (ITC) of the American Association of Community and Junior Colleges, recognize the need for educational telecommunications representation at the national level. ITC (1) disseminates information about instructional telecommunications, (2) assists institutions in its use, (3) encourages cooperation in media-based curriculum planning and course production, and (4) lobbies for federal and other policy formation that affects instructional broadcasters.

At the four-year level, aside from the University of Mid-America, a telecommunications task force has been formed at the National Association of State Universities and Land-Grant Colleges.

Areas particularly suited to telecommunications are those related to professional and occupational development, and continuing education.

"Alternative Funding Advice." *Broadcasting,* February 1, 1982, pp. 72-73. A review of proposals for public broadcasters to seek alternative funding sources.

"Apocalypse Now for Public Broadcasting." *Broadcasting,* February 15, 1982, pp. 36. A review of testimony given at a Senate hearing on reducing federal support for public broadcasting.

Behrens, Steven and Brooke Gladstone. **"Public Broadcasting: The High Cost of Going Private."** *Channels,* February/March 1982, pp. 41-43. An examination of the public broadcasting ad test and its effect on the system as a whole.

Binns, Warren J. Jr. **"FITS: Florida Instructional Technology Services."** *E·ITV,* January 1982, pp. 50-51. A profile of a service to provide instructional programming and duplicating services to educational institutions throughout Florida.

Brown, Les. **"Guilty of Innocence."** *Channels,* February/March 1982, pp. 18-19. A commentary on the future of television as cable systems and two-way services proliferate.

Brown, Les. **"Television II: Today and Tomorrow."** *Better Broadcasts News,* January/February 1982, pp. 4-6. An address delivered at the American Council for Better Broadcasts conference commenting on the need for a media-wise society in response to the new television technologies.

"Convocom Awarded Start-Up Grant." *SSU Journal,* January 20, 1982, p. 1. A report on a NTIA grant to the West Central Illinois Telecommunications Corporation to implement a television network for educational, cultural, and public affairs programming.

Drucker, Laurie. **"Closed-Captioning: Access for the Hearing-Impaired."** *Access,* January 11, 1982, pp. 1-2. A review of developments that may threaten closed-captioning services.

Maftoon, Javad. **"ITV: Are Teachers Using It?"** *T.H.E. Journal,* February 1982, pp. 45-46. A discussion of factors affecting non-use of television for instruction.

"Making More Out of Less at PBS." *Broadcasting,* January 25, 1982, pp. 32-33. A discussion of proposed operational procedures at PBS to improve programs.

"Many Ways to Cross Electronic Frontier." *Broadcasting,* February 15, 1982, pp. 78-79. A look at a California company's venture to offer video, voice, data, text, and facisimile services by way of multipoint distribution service, operational fixed service, digital transmission service, common carrier radio, and low-power TV.

"LPTV Back on Front-Burner." *Broadcasting,* January 25, 1982, pp. 29. A report on rules and regulations forthcoming from the FCC on low-power television.

"LPTV Gets the FCC Go-Ahead." *Broadcasting,* March 8, 1982, pp. 35-36. An announcement of the FCC's final rules regarding LPTV service.

"LPTV Presence Puts Pressure on Washington." *Broadcasting,* February 1, 1982, pp. 28-30. A report on discussions at the LPTV conference held in Washington.

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"No Quick Fix for LPTV Logjam: Jones." *Broadcasting,* February 1, 1982, pp. 27-28. A review of remarks by FCC Commissioner Ann Jones regarding the future of LPTV.

"Now . . . Words From a Sponsor." *Time,* March 15, 1982, p. 92. A commentary on the prospects for commercial advertising on public television.

"Shaky Start for Low-Power Show." *Broadcasting,* January 25, 1982. A report on lackluster participation by major equipment manufacturers at the first low-power television conference and exhibition.

"Supreme Court to Review KCET-Hearing-Impaired Case." *Broadcasting,* January 18, 1982, pp. 60-62. A review of developments resulting from a lower-court ruling that noncommercial stations must serve hearing-impaired viewers.

"University of Southern California Extends ITV System in Orange County." *AMCEE Monitor,* January 1982, p. 2. A report on the expansion of USC's instructional television network which offers interactive programs to students at their worksites.

Cable Television

"The Local Station That Could," by Greg Mitchell, *Channels,* February/March 1982, pp. 34-39.

A case study of a local television station serving the Scranton/Wilkes-Barre region of Pennsylvania is described in this article. WNEP, a locally-owned ABC affiliate, has taken programming and financial gambles that have paid off. It has faced the challenge of cable head-on by producing local programming that is difficult, if not impossible, for outsiders to match. In the process, WNEP has risen its audience share from 22 (Nielson rating) in 1975 to 43 in 1979, more than double that of the combined ratings for the two competing stations.

The station's success is attributed to professional management and marketing, as well as reliance on local news programming. Due to the viewer appeal of "live feeds," heavy investment was made in electronic news-gathering equipment, researchers, and reporters.

"Wired for Cable?" by Harry Durham, *CASE Currents,* January 1982, pp. 12-14.

A recent survey of higher education institutions suggests that although many are using cable TV, their involvement is traditional. Colleges are not taking full advantage of the medium, suggests the Clemson university relations director.

New cable TV subscribers are signing up at the rate of 250,000 per month, with about 25 percent of U.S. homes now wired for cable. In Canada, the figure is about 50 percent. Academe can take advantage of this situation in two ways: (1) use cable TV's extra channels to offer campus events to audiences far beyond the geographic units of the campus itself, and (2) encourage faculty and staff members to produce material in electronic and written form for specialized audiences.

Cable TV allows institutions to present lectures, concerts, plays, or sporting events to home audiences. It is possible to generate revenue through advertising during such events. Advancement programs might also use cable broadcasts.

Institutions currently making good use of cable TV include Illinois State (a student local-news show produced by students for academic credit) and Delta State (rerunning athletic events, music concerts, and general information).

Baker, Jeri. **"Must Reading."** *CableVision Plus,* March 8, 1982, pp. 4-10. A profile of Dow Jones & Company's interactive cable information services.

"Cable 1981: A Taste of Reality." *CableVision,* January 4, 1982, pp. 26-30. A look at the major events affecting the cable industry in 1981.

Evanow, Peter. **"Tele-publishing Workout."** *CableVision,* March 8, 1982, pp. 16, 18. An overview of a seminar to discuss options for newspapers wanting to offer services via cable.

"FCC Asked to Open Up MDS Band As Challenge to Cable." *Broadcasting,* February 15, 1982, pp. 31-32. A discussion of a proposal before the FCC to expand and restructure the multipoint distribution service to become competitive with cable.

Grillo, Jean Bergantini. **"Divided Attention."** *CableVision,* February 1, 1982, pp. 17-19. A survey of cable professionals on cable viewing habits and predictions of programming for the future.

Hill, Arthur. **"1981 in Washington—The Year That Cable Would Like to Forget."** *TVC,* January 15, 1982, pp. 57-58. A review of developments in cable legislation and regulation that have changed the industry's image in Washington.

Hill, Arthur. **"Visions of the '80s and Beyond: Cable Contemplates the Future."** *TVC,* January 1, 1982, pp. 56-59. A

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report on the Western Cable Show featuring debate on copyright and municipal regulation, refranchising, federal deregulation, and future services.

"How Far to Go On (De)Regulation of Cable Industry." *Broadcasting,* January 25, 1982, p. 78. An overview of Senate Commerce Committee hearings.

Miller, Nancy. **"Courses Via Cable."** *CASE Currents,* January 1982, p. 15. A profile of Pennarama, Pennsylvania's continuing education cable service that provides instruction for adults.

"Minorities in Cable: Short Course On Getting a Piece of the Action." *Broadcasting,* February 22, 1982, pp. 70-72. A review of remarks made at the first conference of Minorities in Cable.

Moozakis, Chuck. **"Technology's 'Year of Reality'."** *TVC,* January 15, 1982, pp. 60-63. A report on cable's technological advancements in 1981.

"Must-Carry Is Latest Obstacle in Copyright Compromise." *Broadcasting,* February 1, 1982, pp. 40-41. A report on the controversy over must-carry provisions in the cable copyright compromise.

"NLC Presents Its Case: Cable As Common Carrier." *Broadcasting,* February 1, 1982, pp. 52-54. A review of the National League of Cities' request to Congress for legislation allowing cities to regulate cable systems.

"1982 CATV Suppliers Phone Book." *TVC,* March 1, 1982, pp. 35-66. A listing of manufacturers, agencies, and companies serving the cable industry.

Pesin, Ella. **"Franchise Fees, Taxation: Cities' Appetites Growing."** *CableAge,* January 25, 1982, pp. 6-9. A report on municipalities' attempt to circumvent an FCC franchise fee ceiling by taxing cable systems to offset budget cuts.

Rothbart, Gary. **"Screening the Future."** *CableVision,* March 8, 1982, pp. 15-17. A discussion of the profitability of videotext systems offered by cable.

Schriber, Jon and Thomas O'Donnell. **"Broadcasting."** *Forbes,* January 4, 1982, pp. 236-237. A discussion of the lack of new programming for the proliferation of cable systems in operation.

"State Associations Get Strong Legislative Results." *CableAge,* January 11, 1982, pp. 6-15. A survey of state associations on pending cable legislation and litigation categorized by type and state.

"Systems Learning Lessons in Public Access Efficiency." *CableAge,* February 22, 1982, pp. 29-32. An examination of cable systems involved in public access programming.

"The Best of Two Worlds." *Profiles,* Spring 1982, pp. 2-7. A description of the Western Communications Cooperative which offers educational/institutional programming via cable.

Teletext/Videotext

"The Videotext Frontier: New Developments, New Opportunities," *Cable Communications,* January 1982, pp. 18-19.

Market analysis of new videotext services for home and business users suggest that cable operators should think seriously about their futures in videotext communications. Recent developments in publishing, real estate, travel, and medicine indicate the vast potential for videotext and cable.

The electronic newspaper, for example, is now a reality and needs only a suitable electronic medium to expand for local distribution. Similarly, large retail chains such as Sears are beginning to offer teleshopping (including insurance) and real estate services, and "teletravel" services to homes and businesses that could make travel agents obsolete. Further, health monitoring and advisory services using videotext terminals are now possible via telephone or cable lines, representing a multi-million dollar potential in home medical electronics. These home medical electronics services would take advantage of the recent trend in the U.S. toward preventive medicine.

The issue is whether cable operators or telephone companies will claim these consumers.

Applebaum, Simon. **"Videotext From Above."** *CableVision,* January 25, 1982, p. 59. A report on a joint venture between Canada's Telidon and Times Mirror videotext services division for a six-month experiment in California to market software as well as hardware.

"CBS Presses FCC for Teletext Standard." *Broadcasting,* January 18, 1982, pp. 80-81. A report of CBS' criticism of the FCC on its failure to adopt a North American standard for teletext systems.

"Current Information and Lots of it Sought by Videotext Users." *Broadcasting,* January 18, 1982, p. 18. A report on a research study of videotext users conducted on the Columbus, Ohio cable system.

"England's Prestel Makes U.S. Debut." *Broadcasting,* January 25, 1982, pp. 82-84. An announcement of the launching of the British videotext service in Boston, Massachusetts.

Gage, Theodore J. **"Two-Way TV Screening Out the Bugs."** *Advertising Age,* January 18, 1982, p. S-2. A look at several companies offering two-way teletext services in the U.S.

"Newspapers Get a Glimpse of Their Electronic Future." *Broadcasting,* February 1, 1982, pp. 68-69. A review of a seminar held to acquaint newspaper publishers with features of electronic publishing, a combination of videotext, cable, and telephone technologies.

O'Donnell, Thomas and Jon Schriber. **"Publishing."** *Forbes,* January 4, 1982, pp. 238-239. A look at the variety of companies entering into electronic publishing with videotext services, and the future of traditional publishing.

"Still Tugging and Pulling on Teletext." *Broadcasting,* February 15, 1982, pp. 34-35. A review of comments made in response to an FCC rulemaking.

"Teletext in Northwest." *Broadcasting,* February 22, 1982, p. 80. A report on the operation of the Ceefax Oracle teletext system in Seattle, Washington.

"Videotext Gets Its Own Group." *Broadcasting,* February 8, 1982, p. 112. A report on the establishment of the Videotext Industry Association to promote the development of videotext and teletext in the U.S.

"Videotext: Smack in the Middle of AT&T's Sights." *Broadcasting,* January 18, 1982, p. 33. A discussion of AT&T's probable entry into the videotext market once Justice Department settlement becomes effective.

Computers

"Impact of an Online Circulation System on Interlibrary Services," by Danuta A. Nitecki, *Special Libraries,* January 1982, pp. 6-11.

Using an online circulation system for interlibrary loans in an academic library, the Illinois Research and Reference Center at the University of Illinois at Urbana-Champaign, is described from three perspectives: its administrative, pragmatic, and conceptual impact.

The Library Computer System (LCS) at Illinois has had an administrative effect that can be measured quantitatively in terms of workflow and quality of service. The pragmatic impact is reflected in terms of relations between local users and off-campus clients, and the conceptual impact may be seen in the speculations about future developments, including changing attitudes toward services and potential cooperative collection.

LCS incorporates software originally designed at Ohio State and modified for use at the Illinois library in December 1978. The system is run on a university computer in Chicago and can be accessed through hard-wired dedicated terminals or through use of a telephone dial-up port. Data on the holding and current circulation status of the collections at the Urbana campus, as well as at the other University of Illinois locations in Chicago, Rockford, and Peoria, are available online to users at all locations. In addition, 14 other academic libraries

throughout the state have converted their holdings and circulations records to LCS. A total of approximately 4.7 million bibliographic records, representing 7.5 million volumes, is included in the combined databases.

Three rules are suggested for managing online circulation systems for interlibrary loans: (1) monitor the administrative impact of the use of the technology, (2) anticipate resistance among staff and users, and (3) expand local resources through cooperative collection and improved access to information.

"The Miracle Worker: How Computers Help Handicapped Students," by Andrew L. Ragan, *Electronic Learning*, January/February 1982, pp. 57-58, 89.

The microcomputer has become a teacher, therapist, and occupational skills trainer for many handicapped people. Even small children with both mental and physical disabilities are able to take advantage of these new electronic devices. The microcomputers not only motivate, but also give handicapped people a measure of independence.

The New Jersey Institute of Technology has been researching microcomputer uses in this field for three years; the results are being applied at a cerebral palsy center, and they often contain elements of both education and therapy.

The handicapped are able to access the computers in a number of ways: using magnifiers to enlarge video screen characters, braille keyboards, voice activators, etc. Once access is established, the microcomputer can provide auditory feedback for deaf people learning to speak; or it can help immobile people trigger, via voice command, devices that operate lights, radio, etc. in the home.

The versatility of the microcomputer as an aid for the handicapped person sets it apart from the single-purpose mechanical devices it is replacing. Organizations helping to promote its use and exchange ideas about it include: the National Institute of Rehabilitative Engineering, the Handicapped Education Exchange (HEX), and the Young People's LOGO Association.

(This article includes a guide to computer aids for handicapped people.)

Abelson, Philip, ed. **"Computers and Electronics."** *Science*, February 12, 1982, pp. 749-872. A special issue devoted to essays on the impact of the computer revolution in the scientific, medical, and technical communities.

Borko, Harold. A review of **"Planning for Computing in Higher Education,"** edited by James C. Emery, in the *Journal of Higher Education*, Vol. 53 (January/February 1981), 117-118. A discussion of the published proceedings of the October, 1979, EDUCOM conference in San Diego, California.

"Buying a Micro: What Every Educator Should Know." *Electronic Learning*, January/February 1982, pp. 26, 28. A guide to selecting microcomputer hardware and software.

DeVore, Paul W. **"Microprocessors, Robotics, and Work."** *Man Society Technology*, January 1982, pp. 6-9. An analysis of how microcomputers may change the workplace and the worker of the future.

Dodson, Ann T., Paul P. Philbin, and Kunj B. Rastogi. **"Electronic Interlibrary Loan in the OCLC Library."** *Special Libraries*, January 1982, pp. 12-20. A study of the effectiveness of an electronic interlibrary loan system.

Dove, Lewis. **"WIU: Bridging the Gap Between Faculty and Computers."** *Electronic Education*, January 1982, pp. 22-23. A profile of Western Illinois University's approach to overcoming faculty resistance to computers.

"Electronic Mail for Deaf Studied." *TeleSpan*, January 15, 1982, pp. 19-21. A report on a project to study the uses of computerized telecommunications for the deaf in Boston, Massachusetts.

"Electronic Teacher Links Far-Flung

SOURCESCAN

Books, research papers, and occasional papers with information on how to obtain the publications.

Cable Primer, National Cable Television Association [1724 Massachusetts Avenue NW, Washington, DC 20036]. 1981. 54 pp. $10 members, $15 non-members.

An explanation of how cable systems are franchised and operated. This booklet covers the origins of cable, economics, programming, regulatory policies, as well as developing trends in the industry. Also included are a glossary of terms and sources of government information.

Computer Literacy in Higher Education, by Francis [illegible]lasat. AAHE-ERIC/Higher Education Research Report No. 6, 1981. American Association for Higher Education [One Dupont Circle, Suite 600, Washington, DC 20036]. 56 pp. $6.33.

An examination of issues surrounding the understanding and use of computers in higher education. This report is designed to help faculty and administrators identify constraints to the development of computer literacy programs and is organized around five areas of concern: the relationship of computer literacy to computer science; the use of computers in higher education; curriculum, instruction, and staffing issues; the administration of programs; and the role of the federal government as well as other national issues.

New Technologies Affecting Radio and Television Broadcasting, National Association of Broadcasters [1771 N Street NW, Washington, DC 20036]. 1981. 87 pp. $[illegible].

An overview of the major issues confronting new technologies and their impact on traditional television and radio. This book analyzes economic characteristics, regulatory framework, and program content of cable, subscription, low-power, and high-definition TV; multipoint distribution systems; direct broadcast satellites; teletext; home video; and the increasing number of radio stations available.

Task Force on the Implications of Educational Technology, Final Report, edited by Robert de Kieffer. Available from the Colorado Commission on Higher Education [1550 Lincoln Street, Room 207, Denver, CO 80203; 303/866-2726]. 1981. 266 pp. Free.

A report on the state-of-the-art of educational technology in Colorado that identifies its current and proposed uses in higher education. Included is a set of recommendations to the state for policies that will further the development and adoption of those technologies having the greatest potential impact on the delivery of instruction.

The Cable Television Rush: How to Stake Your Claim, by Cecil Groves, S. Reid, and R. Brey. Austin Community College/Combase [P.O. Box 2285, Austin, TX 78768; 512/476-8140]. 52 pp.

A guide for colleges to negotiate for services with cable operators. Included in this monograph are a discussion of ways colleges benefit from cable use, a bibliography on cable, a glossary of terms, a list of facilities and video equipment required for colleges employing cable, reports on educational access by groups in Austin and Dallas, and the enabling ordinance of the City of Austin.

Policies for Regulation of Direct Broadcast Satellites, by Florence Setzer, Bruce Franca, and Nina Cornell. National Technical Information Service [5285 Port Royal Road, Springfield, VA 22161]. 1981. 131 pp. $13.50. Order number PB81-151201.

Classrooms." *Popular Science*, February 1982, p. 60. A report on Cyclops, a microprocessor that provides two-way communications verbally or visually over telephone lines.

Harjee, Nimira. **"Interlibrary Loan in an Integrated Environment."** *Special Libraries*, January 1982, pp. 1-5. A description of a bibliographic utility that supplies libraries with computer-based systems.

Hatcher, Edward. **"Make Instant 'Slides' With a Microcomputer."** *Training/HRD*, January 1982, pp. 86-91. A description of a computerized slide presentation for use in training.

"How Educators Use Microcomputers." *Electronic Learning*, January/February 1982, pp. 22, 24. A description of educational uses for computers.

Lanson, Gerald. **"Information, Please."** *Science '82*, February 1982, pp. 38-41. A review of computer databases that serve as electronic libraries.

Marbach, William D. et al. **"To Each His Own Computer."** *Newsweek*, February 22, 1982, pp. 50-56. An examination of personal computers.

Park, Richard A., Geoffrey Goldbogen, and Linda R. Caporeal. **"RPI Gives Ataris to Freshman to Study Effects on Campus."** *Electronic Education*, January 1982, pp. 6-8. A profile of a program at Rensselaer Polytechnic Institute that provides students with microcomputers to study the effects on campus.

Perry, Robert L. **"Computer Literacy."** *Mechanix Illustrated*, February 1982, pp. 24-25, 112. A guide to understanding the fundamentals of computers.

Perry Robert L. **"Dialing Up a Wealth of Information."** *Mechanix Illustrated*, February 1982, pp. 56, 109-110. A report on home information networks that link up to databases through home computers and telephones.

Wiegner, Kathleen K. **"Tomorrow Has Arrived."** *Forbes*, February 15, 1982, pp. 111-119. A look at the personal computer market.

Radio

"Visualizing Via Audio." *Broadcasting*, February 22, 1982, p. 80. A report on a project to provide an audio description service to help the blind "visualize" television programs.

Satellites

"Ford Had a Better Idea—A Satellite Press Conference," by Rob Hallam, *EITV*, January 1982, pp. 27-32.

In order to find a more efficient way of communicating with journalists around the country, the Ford Motor Company has adopted the satellite news conference. Ford's version of "Meet the Press" at its annual fall introduction of new models represents the firm's most comprehensive effort to date to reach out to regional journalists.

The news conference was set at a suburban Detroit studio and beamed by SATCOM I to 100 cities. After reviewing bids from companies specializing in temporary satellite downlink systems, Hi-Net was selected on the basis of cost, reliability, and image. Hi-Net was already functioning daily, offering HBO. Reception points for the journalists were Holiday Inn hotels across the country.

The five-hour conference was live, technically well-received, and generated more than 700 news articles about Ford. In addition, HBO viewers became unplanned-for observers.

Beakley, Guy and Alex Best. **"Business Connection for Local Distribution Created By Cable and Earth Station Links."** *Communications News*, March 1982, pp. 74-77. A description of the "institutional B cable" and the business/cable/earth station interconnect.

"Comsat's STC: Poised for Blastoff into TV's Space Frontier." *Broadcasting*, February 22, 1982, pp. 38-45. A profile of one FCC applicant for direct broadcasting satellite service.

"Expanding Satellite Systems Bringing Many More Service Choices to Users." *Communications News*, March 1982, pp. 70-73. A discussion of the new services that will be generated by expanded use of satellites.

Hough, Bruce. **"Meeting Environmental Challenges of Building a Satellite Earth Station."** *Communications News*, March 1982, pp. 85-87. A review of the development and construction of an earth station site.

Neumann, Robert and John Ball. **"The Space Age Comes to Alaska's Classrooms."** *Electronic Learning*, January/February 1982, pp. 52, 54, 66. A profile of Alaska's satellite network for delivering educational programs.

Price, Davis. **"Which Speed Ahead?"** *CableVision*, January 4, 1982, p. 41. A report on the possible effects of DBS on current and future telecommunications users discussed before the House Subcommittee on Telecommunications, Consumer Protection, and Finance.

Teleconferencing

"Teleconferencing Reaching a Critical Pivotal Stage in Growth and Development," by Willard and Cinda Thomas, *Communications News*, February 1982, pp. 46-48.

A discussion of the potential market for direct broadcast satellites, the number of potential channels available in the U.S., regulatory classification of systems, and the advantages and disadvantages of plans for block spectrum assignment.

Telecommunications and the Computer, by Ira W. Cotton. Available from the Association for Media-based Continuing Education for Engineers [225 North Avenue NW, Atlanta, GA 30332; 404/894-3362]. Sale price: $3,600; rental: $900 for 12 weeks.

A video course for managers planning for, or using, interactive computer systems. Twelve color programs run from 35 to 60 minutes each and focus on management of computer networks, database distribution and security systems, switching techniques, and terminal interfaces. Also available are textbooks, study guides, and reference materials.

The AV Connection: The Guide to Federal Funds for Audio-Visual Users, edited by Kathleen Springer and Dorothy Aukofer MacEoin. National Audio-Visual Association [3150 Spring Street, Fairfax, VA 22031]. 1981. 261 pp. $33.

A guide to federal grant programs that subsidize the purchase of A/V equipment, materials, and services, including programs that may allow funding for microcomputers. Written by a team of federal program specialists, this book explains new government regulations, how to prepare grant applications, how federal programs are funded, and terms that applicants should be familiar with.

The 1982 Teleconferencing Directory, the Center for Interactive Programs, University of Wisconsin [Old Radio Hall, 975 Observatory Drive, Madison, WI 53706]. 1982. 29 pp. $29.00.

A director of 170 teleconferencing systems in the U.S. and overseas. This book includes addresses, phone numbers, and contact persons for organizations that use teleconferencing for meetings, training, education, and other communications. Includes a glossary of terms, an index of users classified by type of system, and a listing of providers and vendors of services and products for teleconferencing.

Videodiscs: The Technology, the Applications and the Future, by Efrem Sigel et al. Knowledge Industry Publications [701 Westchester Avenue, White Plains, NY 10[illegible]. 1980. 183 pp. $29.95.

A report on the technical development of videodiscs, what they can do, their relationship to other communications technologies, and the economic forces that will determine the acceptance of discs in institutional and consumer markets. The authors suggest that the potential of videodiscs in the educational/industrial market is good, and they address the appropriate uses and level of effort required for its application.

Teleconferencing in general, and two specific methods in particular, are reaching development stages critical to users and suppliers alike. Five specific teleconferencing methods are now at different growth stages: (1) audio-based interactive, which includes the "audio only" being marketed nationally by the Bell system; (2) word-based interactive, commonly called computer conferencing; (3) video-based interactive, in which two or more locations are linked by a multichannel video system and every group can see every other group; (4) video-based participative, used for shareholder meetings, seminars, etc.; and (5) computer and video-based flexible, which is the method of the future since it combines all of the others. Both Picturephone Meeting Service and Satellite Business Systems have been working in the latter area.

Factors that will push teleconferencing methods into different growth stages include: the recognition by users of the potential power of teleconferencing to increase decision effectiveness and managerial-professional productivity; integrated communication planning and analysis; the integration of telecommunications planning with meeting planning; the increasing cost, and time of travel; the growing use of satellite systems and services; and the development of midband local distribution links between satellite links and surrounding areas.

Cable TV systems provide the eventual answer for organizations and institutions wanting to take advantage of teleconferencing without purchasing an entire communications systems.

Bloom, Karen. **"Taking A Mile."** *CableVision*, March 8, 1982, p. 49. A look at Holiday Inn's improved position in the meetings market with its teleconferencing venture.

"Captured Frame Video Conferencing Applications." *TeleSpan*, February 15, 1982, pp. 2-5. A discussion of how slow scan television is being used by organizations for teleconferencing.

"Corporate America Finding Gains in Productivity Through Teleconferencing." *Communications News*, February 1982, pp. 44-45. A discussion of the growing use of teleconferencing and related benefits for companies.

Cross, Thomas. **"Teleconferencing Is An Important New Tool for Business Productivity."** *Communications News*, February 1982, p. 49. An examination of two video teleconferencing systems and their effect on the conduct of business.

"Honeywell's Least Package Approach." *Telecoms*, January 1982, pp. 4-5. An overview of the Honeywell Inc. teleconferencing network.

"Georgia Hospital Association Teleconferencing System." *TeleSpan*, February 15, 1982, pp. 13-17. A case study of a statewide teleconferencing system.

Gold, Elliot. **"Aetna's Successful System Designed Around User Needs."** *Communications News*, February 1982, pp. 50-51. A case study of a teleconferencing system at Aetna Life and Casualty designed according to user feedback.

Gruebel, Jerold. **"Bridging Higher Education in Indiana: 'Meet Me' By Telephone."** *T.H.E. Journal*, February 1982, pp. 59-60. A profile of the Indiana Higher Education Telecommunication System's telephone conferencing system.

Miura, A., S. Michael Stevenson, and David Linker. **"Video Teleconferencing Brings New Direction to Business in the 1980s."** *Communications News*, February 1982, pp. 52-53. A discussion of how businesses cut operating costs through teleconferencing.

Munsey, Wallace. **"First Phase of Telemedicine Program is Prescription for Improved Health Care."** *Communications News*, February 1982, p. 62. A description of a program to relay diagnostic images to radiologists in their homes over telephone lines.

Parker, Lorne A. and Christine Olgren. **"CIP Releases New Teleconferencing Study."** *Telcons*, January, 1982, pp. 1, 8. A review of a study on interactive teleconferencing, the state-of-the-art, and the applications.

Copy Delivery Systems

"Discs Come Home," by Frederick Rashad Ali Browning, *Audio-Visual Communications*, January 1982, pp. 38, 40, 86.

The potential of computer/videodisc systems for education and entertainment is described in this article on home use of technology. It is suggested that instructional technologies are in a position to bridge the gap between educational and recreational programs.

For example, by programming questions with the videodisc and Apple Computer, a family can stop and discuss specific elements of programs. Emphasis can be on family interaction as parents pinpoint ideas with a videotape.

Questions for parents evaluating a film include: (1) Does the film include an integrated and organized set of ideas? (2) Does it prepare the viewer for upcoming information? (3) Does the flim offer viewers strong encoding/retrival cues? (4) Does it allow time for rehearsal of the material? (5) Does the film have a strong visual component? (6) Is it interesting? and (7) Does the flim include prescreening materials? Films can be used at different times for different objectives. Bell and Howell is attempting to create entire programs that utilize the capability to interface an Apple microcomputer with videotapes and discs.

Once implemented, the computer/videodisc system can be used by children alone to supplement homework assignments. The instructional technologist must examine ways of instructing parents on different educational uses of home video systems. In this way, parents can have more control over television.

"Air Force Enrolls 500 in Video Courses." *AMCEE Monitor*, January 1982, pp. 1-2. A report on an Air Force program of videotape courses for engineers, scientists, and technical personnel.

Bardin, Chris. **"Home Video: A Global Report."** *ITA News Digest*, January 1982, pp. 3, 22-23. A report on the findings of a Time Magazine study that compares the demographics of video owners in Latin America, Asia, and the Middle East with those in the U.S. and Europe.

Borchard, William M. **"What the Court of Appeals Said and How It Affects Our Industry."** *ITA News Digest*, January 1982, pp. 5, 19-21. An examination of the copyright ruling prohibiting home recording of programs and its significance for program producers and consumers.

Brief, Henry. **"Europe Is World's Biggest Home Video Market, But With Problems."** *ITA News Digest*, January 1982, pp. 6, 17-18. A comparison between the European and U.S. home video markets.

De Angelis, Richard and Elizabeth A. Rimm. **"Walter Reed's CCTV Channels for Patient Education."** *E·ITV*, February 1982, pp. 56-58. A description of videotape programs for cardiac patients and their families.

Lovic, Bob. **"Teaching TV With TV."** *E·ITV*, February 12982, pp. 62-64. An examination of a video monitoring system used to teach television production to students at the U.S. Air Force Academy.

"VNN: New Channels for Non-Broadcast TV." *Video Systems*, January 1982, pp. 34-35. A profile of an information network recorded on videotape for television station managers.

Paris, Judith and Richard W. Boss. **"The Maintenance Requirements of Videodisc Systems."** *E·ITV*, February 1982, pp. 53-55. A discussion of videodisc technologies and the care and maintenence required for each.

Thurman, Glenda B. **"A Consumer's Guide to Videodisc."** *American Libraries*, January 1982, p. 93. A guide to selecting a videodisc system based on the variations of each technology and how the disc will be used.

"Videodisc Sales Below Expectations." *Broadcasting*, February 1, 1982, p. 76. A report on the closing of a videodisc manufacturing plant due to slow sales.

MACROSCAN

Programs, projects, conferences, workshops, other events, and funding sources.

Computers to Aid Disabled Focus of National Search

A nationwide search was undertaken in the fall of 1980 to identify the most promising ideas using personal computers to assist disabled persons in coping with difficulties in work, home, and community settings. Winners of the Johns Hopkins University National Search for Applications of Personal Computing to Aid the Handicapped were announced last fall before the National Academy of Sciences. The search was co-sponsored by the National Science Foundation and Radio Shack, a division of Tandy Corporation.

First prize of $10,000 was awarded to a City University of New York professor who programmed a low-cost, off-the-shelf, mass-produced pocket-sized computer for rapid communication by the deaf over public telephone lines. This Portable Telecommunicator for the Deaf can be connected to a telephone for instant communication between deaf or hearing-impaired persons.

A system that allows one to cause a word or phrase to become audible by looking at it on a computer screen won second prize. Third prize winner was the developer of a Lip Reader Trainer that aids in the teaching of lip reading by converting typed sentences into displayed animated mouth movements. Seven other inventors, all first-place winners in the regional competitions, were awarded honorable mentions.

Official proceedings of the search are available from IEEE Computer Society, 10662 Los Vaqueros Circle, Los Alamitos, CA 90720 for $22.

South Carolina ETV Plans to Expand Statewide ITFS System

South Carolina ETV has developed a plan to implement a state-owned ITFS network to reach public schools and other government and community agencies which are currently unserved. Resulting from the recommendations of a Public Service Satellite Consortium study, the plan calls for one of four channels to be allocated to higher education, technical education, hospitals, and training for the public and private sectors.

The new system will be accessible to 855 sites, 299 of which are to be designated for technical education centers, state agency and law enforcement training sites, and other adult learning activities. One location in each of the state's 46 counties is specified as a general learning site.

Programming will include graduate and continuing education, as well as specialized series for senior citizens, the handicapped, and other targeted audiences. Business and industry could purchase systems of their own.

Implementation of the plan will take six years, and the PSSC study shows that by 1990, a comparable system with leased equipment would cost more than twice that of the ITFS system. For details and information, contact Bill Hopkins, South Carolina ETV, Drawer L, Columbia, SC 29250; 803/758-7216.

U. of Wisconsin To Launch Slow Scan Network in Fall

With the purchase of 30 freeze-frame video units, the University of Wisconsin-Extension (UWEX) will launch a dedicated freeze-frame network this fall. The new equipment, to be installed by July 1, 1982, can "freeze" a picture of an object and transmit it to other locations. The system should be operational by September, benefitting students and instructors in Wisconsin's Statewide Extension Network (SEEN).

SEEN is one of several interactive delivery systems operated by UWEX, and interconnects 25 Wisconsin cities for professional education and administrative communications. Thus, residents are able to take courses originating hundreds of miles away in their own communities.

Students and instructors using the network communicate through the use of leased telephone lines, while viewing visual materials. The new freeze-frame equipment, also referred to as slow scan, will improve the visual instruction now provided by electrowriters, giving instructors more flexibility through broader use of visuals and smoother coordination of audio and video.

UWEX's 17 years of experience in teleconferencing should guarantee that this equipment will be used to its fullest potential to serve some of the approximately 40,000 people using its teleconferencing systems each year.

For further information contact Lorne Parker, director of instructional communications systems, UWEX, Radio Hall, Madison, WI 53706; 608/262-4342.

Alternate Media Center Offers Short Courses

"Videotext: Market Experience and Development," conducted on February 4 and 5, 1982, was one of an ongoing series of intensive short courses offered by the Interactive Telecommunications Program and the Alternate Media Center of New York University. This two-day short course on videotext focused on the commercial market and brought together a faculty of experts from industry and consultants having first-hand experience in the planning, management, and operation of videotext services. Topics included "Prospect[illegible] Consumers," "The Videotext Market, "Selling Videotext," and "Launching a Service," as well as issues related to the design and implementation of a videotext service.

Future courses will address technologies such as videodiscs, teleconferencing, and electronic publishing. For more information, contact William Herring, NYU Interactive Telecommunications Program, 725 Broadway, 4th Floor, New York, NY 10003; 212/598-3338.

Teleconferencing Workshops Available from PSSC

The Public Service Satellite Consortium is sponsoring five workshops on "How to Video-Teleconference Successfully," in 1982. The workshops are designed for those who want to learn about teleconferencing, from budgeting and selecting a network, to choosing a producer and on-camera talent. PSSC conducted three workshops on video-teleconferencing in 1981.

The first workshop was scheduled for March, 1982 in Denver, Colorado, at the PSSC technical office. Co-sponsors of subsequent workshops include: the Maryland Center for Public Broadcasting, the American Hospital Association, the Association for Higher Education of North Texas, and the University of California-Los Angeles Graduate School of Management.

Individual sessions of the workshops will address elements involved in producing successful teleconferences, including program development, interaction, promotion and audience preparation, networking, and available ground stations. A closed-circuit telecast will simulate a video-teleconference, featuring on-camera talent in a discussion on costs and budgeting for an event.

For further information about workshop dates, locations, hotel accommodations, and costs, contact Polly Rash at PSSC, 202/331-1154.

Contributors

The following periodicals were reviewed for this issue of *TELESCAN*, but do not appear in our original list of publications:

AGB Reports
Association of Governing Boards
AMCEE Monitor
Association for Media-based Continuing Education for Engineers
American
The American University
Electronic Education
Electronic Communications, Inc.
Electronic Learning
Scholastic Inc.
ITA News Digest
International Tape/Disc Association
Man Society Technology
American Industrial Arts Association, Inc.
Mechanix Illustrated
CBS Publications
Profiles
W.K. Kellogg Foundation
PSCcuny
City University of New York
Science '82
American Association for the Advancement of Science
SSU Journal
Sangamon State University
Telecoms
University of Wisconsin-Extension
Training/HRD
Lakewood Publications, Inc.
VocEd
American Vocational Association, Inc.

Contributors to this issue of TELESCAN are listed below. The efforts of these individuals have been critical to our monitoring activities. ***We urge those of you who wish to become part of this important information network to submit to TELESCAN items of potential interest to our broadly based audience.***

Lynn Barnett
ERIC Clearinghouse on Higher Education
John Lott Brown
University of South Florida
Peter Dirr
Corporation for Public Broadcasting
Carol Brown Eilber
Consultant
Susan Fratkin
National Association of State Universities and Land-Grant Colleges
Jinny Goldstein
Public Broadcasting Service
Michael Goldstein
Dow, Lohnes & Albertson
Karen Kearns
National Public Radio
Hilda Moskowitz
Fund for the Improvement of Postsecondary Education
Linda Resnik
Appalachian Community Service Network
Kenneth Salomon
Dow, Lohnes & Albertson
James Zigerell
American Association of Community and Junior Colleges

Errata

An article appearing on page 8, Issue 4 of *TELESCAN* ("Satellite Growth Shows Huge Gains Continuing.") was incorrectly identified as appearing in *Satellite Communications*. It was actually published in *Communications News*. The other bibliographic information is correct.

BULLETIN

Carnegie Corporation of New York renews funding for Center for Learning and Telecommunications. Details on proposed activities and expanded services will appear in Issue 6.

Center for Learning and Telecommunications
One Dupont Circle, Suite 600
Washington, D.C. 20036
202/293-6440

Director: **Marilyn Kressel**
Research Director: **Raymond Lewis**
Communications Coordinator: **Karen Sibert**

The Center is supported by the Carnegie Corporation of New York.

TELESCAN is designed by Peabody Communications, Washington, D.C.

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TELESCAN

JULY/AUGUST 1982

The Digest of the Center for Learning and Telecommunications VOLUME 1 ISSUE 6

Carnegie Renews Grant To Continue Center

The American Association for Higher Education has received a two-year renewal grant of $370,000 from the Carnegie Corporation of New York for the Center for Learning and Telecommunications to continue its work in providing information on the uses of telecommunications for adult education and training. In the two years since its inception, the Center has established itself as a central source to inform the higher education and technology communities about the potential of telecommunications for instructing adult learners.

Through the general monitoring we've done for *TELESCAN*, and the program-specific information acquired on the 70 model programs appearing in our forthcoming book, *Meeting Learners' Needs Through Telecommunications: A Directory of Programs*, we've developed a unique data base. The new grant from Carnegie will enable us to make this data base even more accessible to our constituents in the coming year with continued issues of *TELESCAN*, a new research agenda, and a computer-based information/referral service.

TELESCAN has been, and will continue to be, a critical element in our efforts. This issue is the last in Volume 1, and we can proudly note that we've exceeded our goal for subscribership in year 1. In addition, our subscribers represent a wide range of professionals with a serious interest in this area. These include higher education administrators and faculty; public broadcasting station managers; executives from local, state, and federal agencies, private industry, trade associations, and many more.

Each of you has made *TELESCAN* possible. Through your support, contributions, and suggestions, you have shaped a publication that we sincerely hope has met your needs in organizing the abundance of information about telecommunications and education. We are, indeed, indebted to all of you. And we would like to count on your continued involvement in several ways.

First, please let us know what new features *TELESCAN* might incorporate to better serve your needs. Second, refer to us the names of your colleagues who might like to receive a complimentary copy of *TELESCAN*. Third, fill out the enclosed form today to renew your subscription for Volume 2.

We are offering a special incentive for charter subscribers to renew before September 15, 1982: a discounted rate of $40 ($35 for AAHE members). After September 15, *TELESCAN* will cost $45 ($40 for AAHE members). Our special offer also includes a comprehensive, cross-referenced index to Volume 1 of *TELESCAN*, providing immediate access to the more than 1,000 entries contained in back issues.

Take time now to fill out your renewal form. You won't want to miss a single issue of *TELESCAN*. As charter subscribers to this up-to-date digest of developments in telecommunications for education and training, you've demonstrated your commitment to the future. The future of *TELESCAN* depends on its readers. With your support, assistance, and guidance we can make *TELESCAN* and the expanded information services of the Center a worthwhile and creative enterprise. Thank you.

Marilyn Kressel

Marilyn Kressel
Director, Center for Learning and Telecommunications

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2nd round of Annenberg proposals received . . . . . **page 2**

Network for satellite interconnection of colleges planned . . . . . **page 2**

Review of periodicals from March through May . . . . . **page 4**

Sourcescan entries cover computers, cable, TV/radio/film, and information technology . . . . . **page 6**

Apple Foundation funds computer projects . . . . . **page 11**

Bridge-building between business and academe featured at technology conference . . . . . **page 11**

Canadian ITV establishes adult learning branch . . . . . **page 11**

CAEL regional conferences participate in teleconference . . . . . **page 11**

The Center is a program of the American Association for Higher Education One Dupont Circle Washington, DC

CAPITOLSCAN

Washington-based, national initiatives involving uses of telecommunications in higher education.

Campus Satellite Network Formed

The Board of Directors of SatServ, a subsidiary of the Public Service Satellite Consortium (PSSC), voted at its May 13 meeting to establish a system of interconnected satellite earth stations and associated facilities to be located at participating colleges and universities. The network will be used for teleconferencing and other satellite-assisted events coordinated by SatServ and PSSC.

In selected locations, institutions will be offered the opportunity to become a "primary affiliate" of the network. This will entail acquisition of satellite reception facilities from SatServ or directly from a participating manufacturer on a lease or lease-purchase basis. Each "primary affiliate" will be asked to provide a site for the earth station, connectivity to adequate viewing and meeting facilities, and staffing. Income from events will be divided among institutions, SatServ, and PSSC.

According to PSSC President Elizabeth Young, "Our members are already distributing programs and materials of interest to colleges and universities. The Campus Conference Network will provide a major distribution service that enables institutions to create their own regional and national linkages via satellite. Responses from institutions, based on information sampling and discussions, has been very favorable."

Initially, financing for the network will come from venture capital and other joint arrangements. Requests for bids from interested institutions will be issued in the summer, and the network is expected to become operational in 1983.

For further information, contact Elizabeth Young, PSSC, 1660 L Street NW, Washington, DC 20036; 202/331-1960.

Alliance Between PTV and Higher Ed. Keynote At Telecourse Conference

In the keynote address at the National Telecourse Conference in Dallas, Texas, PBS President Lawrence Grossman told the 275 attendees that the creation of an adult learning effort at PBS this last year is "one of our proudest accomplishments" and that "it is one of PBS' highest priorities and greatest opportunities for the future." He observed that higher education and public television share common goals to "enlighten, inform, and educate the public." Out of these common goals, he suggested, comes a natural alliance between public television and higher education to serve adult learners, now and in the future.

Grossman reported that one-third of all students enrolled in credit-bearing courses in colleges and universities are now over 25 years old and that the number of students 35 years and older has increased 37 percent in the last five years. Of the 60 million adults over age 25 identified as adult learners in 1980, only 30 percent of them were learning through colleges and universities. "One possible consequence," he said, "according to a forecast by the Bureau of Labor Statistics, is that by 1990 the number of college and university faculty will be down 10 percent, while the number of adult students will be up 18 percent.

"The revolution in television holds great promise for helping colleges and universities to find solutions to some of the problems in serving adult learners, full- and part-time, on- and off-campus, in ways that meet their needs and fit their schedules." Grossman also said that the adult learning service at PBS is a beginning for a new partnership between higher education and public television. In the first full year of operation, 220 public television stations and 500 colleges delivered for-credit television courses to 50,000 students.

"All this," Grossman continued, "serves to outline the nature of our growing alliance. We in public television have the highways, the satellite lines, the audiences, the capacity to reach out, the experience in production and use of new forms. You in higher education set the standards, determine the content, provide the accreditation, and offer the evaluation. This is a powerful alliance that can exist to make available all the very best our civilization has to offer. Such a goal is within our reach for the very first time."

For a complete copy of Mr. Grossman's remarks, "Coming Together —Public Television and Higher Education," write Educational Services, Public Broadcasting Service, 475 L'Enfant Plaza SW, Washington, DC 20024; 202/424-9155.

ACSN Offers AMA Computer Course

This fall, the Appalachian Community Service Network, in cooperation with the American Management Association's Extension Institute, will offer a self-study, seven-part course designed for managers who work with computer professionals, and who rely on computer output for decision-making data. The course concentrates on providing the information managers need to establish a fruitful working relationship with their colleagues in this area.

Cable viewers who receive ACSN's programming can register for the course through AMA's Extension Institute. After successfully completing two exams, participants will receive two continuing education units from the Institute. The print version of this course has been used successfully by thousands of managers who need to understand the function of the computer in business.

Further information can be obtained by contacting ACSN, 1200 New Hampshire Avenue NW, Washington, DC 20036; 202/331-8100.

Annenberg Project Generates 213 Proposals in 2nd Round

The second round of grants for the Corporation of Public Broadcasting/Annenberg School of Communications Project has generated 213 proposals requesting $145 million. Approximately $5 million is available to be spent. Project Director Douglas Bodwell reported to the CPB Board of Directors that, "Initial review of the proposals reveals new ideas from organizations that did not submit proposals in the first round."

A preliminary analysis indicates about three out of five proposals for television. The others deal with radio, computers, and nonbroadcast media. Final selections will be made at the September meeting of the project council.

In addition to those announced in February, four grants have been made from a discretionary fund created from interest income and a carryover of grant funds from FY 1981:

- for a videotape of the Independence Hall seminars on the Bill of Rights,
- for an international meeting on educational uses of satellite links,
- for a telecourse on teaching writing, and
- for the revision of a proposal for an ecology telecourse.

LEGISLATIVE REVIEW

Reports on legal issues affecting higher education's use of telecommunications for instruction.

The Breakup Of AT&T: Implications For Colleges and Universities

by Susan Fratkin, National Association of State Universities and Land-Grant Colleges.

The sudden settlement of the seven-year antitrust suit by the U.S. Department of Justice against the American Telephone and Telegraph Company (AT&T), and the legislative proposals in the House and Senate to alter that settlement, will have enormous ramifications for every segment of society, including higher education.

If the Department's settlement holds, AT&T will become two separate companies. One will compete in the unregulated, high technology information industry; the other will provide basic regulated telephone service to the public through 22 regionally organized entities. However, two recently introduced bills could negate the settlement: S. 898, passed by the Senate last October; and H.R. 5158, currently under consideration in the House Energy and Commerce Subcommittee on Telecommunications, Consumer Protection and Finance. Both bills would restructure AT&T in ways that are quite different from those agreed to in the original settlement.

Many Senate members instrumental in the passage of S. 898, particularly those from rural states, have raised serious concerns about the original settlement. They do not believe that costs would be spread evenly over the nation. For example, Sen. Ted Stevens (R.-Alaska) noted that S. 898 is far preferable because it would open competition while assuring that costs for basic services do not escalate too rapidly: "We cannot allow competition to drive down costs in heavy traffic routes while letting costs in rural areas and basic local service skyrocket." While Stevens may be speaking directly for Alaska, his concerns are pertinent to all rural areas.

Many higher education institutions have already begun to examine the feasibility of installing their own telephone systems. Campuses such as the University of Wisconsin-Madison are considering installation of a cable that would provide telephone service, data transmission, and fiber optics capabilities, all free of AT&T involvement. Other institutions have already detemined that the cost of an independent, university-based system is significantly lower in the long term, despite the expensive initial investment required. Also, some campuses have used such tenative plans for independent service to obtain significant concessions from AT&T for additional service.

Why are colleges and universities interested in developing independent local systems? The higher education community is very concerned about the long-distance, high technology, and other functions that would remain in a streamlined AT&T. However, it is the 22 regional companies and their relationships with individual institutions that pose more immediate problems. Local companies now receive handsome payments for the long-distance traffic their customers generate. The Justice Department settlement would revolutionize the methods currently employed for long-distance and would recognize the effective competition developed by companies such as MCI, SPRINT, etc.

The settlement would eliminate the current AT&T monopoly and would allow all long-distance carriers to gain equal access to local telephone exchanges. In addition, the regional companies would be required to set "access fees" for routing long-distance calls, an arrangement likely to hurt local rate-payers significantly. This would be particularly true in a rural state like North Dakota where long-distance volume is low. Metropolitan areas such as Chicago, which generate higher long-distance volumes, would be less affected as competing companies engage in rate wars for long-distance business. To alleviate these discrepancies, S. 898 would give considerable fee-setting power to the Federal Communications Commission; H.R. 5158 may include a similar stipulation.

Local rates and long-distance access fees are only two of many technical issues that need to be "handled with care" prior to any resolution of the AT&T settlement question. Colleges and universities, big users of the telephone, have thus far been notably absent when the "users" have been heard from; regulators, competitors, communications workers, consumer groups, and Congress are the ones raising the serious questions about the AT&T settlement. It is essential, therefore, that institutions of higher education consider their situations in light of the settlement and ensuing legislation. Without quick action on the legislative proposals needed to alter the settlement, it is likely that the AT&T divestiture agreement will be signed and completed by the company and the Justice Department by the end of this year.

HAVE YOU RENEWED YET?

This is the last issue of your current subscription to *TELESCAN*. The upcoming volume promises to continue monitoring developments pinpointed to your special interest area. We want you to renew your subscription, and now is the time to do so.

For charter subscribers who did not meet our July 1, renewal deadline for the special discount, we are offering a second chance for you to save on your subscription to *TELESCAN*. Although we will no longer honor payments at the 1981-82 price of $35 and $30 (for AAHE members), you can still get *TELESCAN*, Volume 2 at reduced rates.

Renew before September 15, and you pay only $40 (members of AAHE will receive a $5 discount on this price). After that date, all subscriptions will be $45 (or $40 at the AAHE membership rate.)

So, don't put it off. Renew today and save. Just fill out the enclosed form on the convenient reply envelope (see page 6) and enclose your check. And while you're filling out the renewal form, won't you take a few minutes to answer some important questions that will help us to plan future issues of *TELESCAN*? Thank you.

Remember—September 15 is the last date by which charter subscribers can receive a discounted subscription to *TELESCAN*.

PRINTSCAN

Abstracts and bibliographies of articles appearing in periodicals from mid-March through mid-May.

Innovative Concepts

"A New World." *Channels*, April/May 1982, pp. 28-31. A series of editorials on the implications of new technologies for the society of the future.

"Measuring the New Technologies." *Broadcasting*, April 12, 1982, pp. 82-83. A report of a National Association of Broadcasters panel discussion on how to track changing television audiences.

"Quello Warns of Overexposure to the New Media." *Broadcasting*, May 3, 1982, p. 74. An address by FCC Commissioner Quello on the role of the FCC in regulating the new technologies.

"New Technologies, New Problems for International Policymakers." *Broadcasting*, April 19, 1982, pp. 65-66. A review of telecommunications policy problems at the international level.

Shain, Irving. **"National Information Policy Issues and Higher Education."** *EDUCOM Bulletin*, Spring 1982, pp. 3-4, 18. A discussion of the policy issues that affect higher education as we move into an information society.

Legal/Regulatory Issues

"Applying First Amendment to New Technologies." *Broadcasting*, April 26, 1982, pp. 84-85. A report on the New Technology and First Amendment Conference in Boston, where participants predicted that the diversity of television outlets would negate the need for the fairness doctrine.

Behrens, Steve. **"Fed Reg Would Mandate PTV Closed-Captioning."** *Current*, March 31, 1982, p. 3. A report on a Justice Department regulation requiring captioning of most PTV programs.

"Cable, Cities Cautious on Goldwater Bill." *TVC*, April 1, 1982, pp. 18-20. A discussion of cable operators' and municipalities' views of cable regulation proposed by Senator Barry Goldwater.

"Common Carrier Amendment Delays Copyright Bill." *Broadcasting*, March 29, 1982, pp. 36-38. A review of an amendment that exempts satellite and microwave from copyright liability, which is delaying passage of cable copyright bill.

"Cutting Into NTIA's Cuts." *Broadcasting*, March 29, 1982, p. 118. A report on the concerns of two members of the Senate Communications Subcommittee regarding cuts in the facilities grant programs at the National Telecommunications and Information Administration.

Gushman, Pat. **"Senate Cools Copyright."** *CableVision*, April 19, 1982, p. 71. A review of comments of members of the Senate Judiciary Committee on the need for unanimous agreement on copyright legislation.

"Justice to House: Get Rid of Cable's Compulsory License." *Broadcasting*, March 29, 1982, p. 38. A review of a Justice Department letter to the House Judiciary Committee urging rejection of compulsory license legislation.

"VCR Copyright Debate Back to Washington." *Broadcasting*, April 26, 1982, pp. 32-33. A discussion of continued hearings on proposed home video recording legislation pending in the House and Senate.

Broadcast Television

"Low-Power TV Outlook," by Harry Martin, *Broadcast Engineering*, April 1982, pp. 80-85. A conference on low-power television (LPTV '82) held in Washington, D.C., in January revealed both dismal and optimistic prospects for the industry. The 1,200 attendees learned that although LPTV is up and coming, regulatory delays are excessive.

The reason for the delays is the huge number of pending LPTV and translator applications (more than 7,000) and the reduced Federal Communications Commission staff to handle them, in spite of an FCC freeze last spring on the filing of new applications. In fact, MX'd (mutually exclusive) applicants are encouraged to settle conflicts through mergers and buy-out agreements. There is also still hope that a lottery for MX'd applications will be approved.

On the other hand, the conference indicated that LPTV will definitely be included in the FCC's new regulatory scheme. FCC Commissioner Ann Jones, in a keynote speech, predicted approval of the new service and establishment of a task force to review the backlogged applications, and indicated her personal opinion that there should be no limitations on who can own LPTV stations.

One suggestion that surfaced from the audience was to take advantage of the many vacant UHF assignments in many mid-sized U.S. cities. Since FCC rules allow even 100W transmitters, LPTV parties could avoid long FCC processing delays by refiling their proposals as standard TV proposals on FCC Form 301.

"Talkback Television: A Successful Statewide Instructional Distribution System," by James A. DeChenne, *Journal of Educational Technology Systems*, Vol. 10 (1981-82), 293-296.

To eliminate the need for professors to commute long distances to off-campus classes in remote areas of the state, Oklahoma officials have adopted "talkback television" (TBTV). This delivery system enables individuals to remain in their home areas and enroll in classes offered by several higher education institutions.

Using three channels in the Instructional Television Fixed Service frequency range (2500-2690 MHz) courses are transmitted from seven universities and two community colleges to 63 receiving sites. Students view the instructor and can "talk back" through standard telephone lines leased for that purpose—eliminating the problem of one-way communication in other television systems.

The Oklahoma State Regents for Higher Education administer TBTV; each participating organization has a TBTV coordinator who helps identify courses to be transmitted. All classes are transmitted live, with accompanying print materials that are identical to those used in on-campus courses. Admission and retention standards for the courses and programs are the same as those applied on-campus at the transmitting institutions.

Besides making quality postsecondary education available effectively and efficiently statewide, TBTV also saves money by eliminating faculty travel and course or program duplication.

"Annual Directory of Production Houses." *E·ITV*, May 1982, pp. 41-92. A listing of over 600 independent production and post-production companies serving video producers in the U.S.

Gladstone, Brooke. **"1st Ad Airs in PTV Test."** *Current*, March 31, 1982, pp. 1, 4. A report on the beginning of the public broadcasting ad experiment.

"Grossman Stresses Importance of Public Media." *Broadcasting*, April 19, 1982, p. 72. A review of PBS President Grossman's opinions on the effect of new technologies on the quality of television programming.

Kalla, Susan. **"The Industry in Transition."** *Satellite Communications*, April 1982, pp. 53-54. A commentary on the eroding boundaries between broadcast-

ers and common carriers based on new means of program distribution.

"LPTV Pioneers: Homesteading Television's Newest Frontier." *Broadcasting*, May 17, 1982. A survey of grantees for LPTV stations and their expectations for the industry.

"Microband & PBS Grab for Same Channels." *Current*, March 31, 1982, pp. 1, 4. A report on competition between PBS and Microband Corp. of America for ITFS channels.

Mugwe, W. W. **"Television as an Agent for Change in Kenya."** *Journal of Educational Television*, Vol. 8 (1982), 47-53. An overview of the role of television in the development of foreign countries.

"Narrowband Educational TV Perfect for Cooperative Lectures." *T.H.E. Journal*, March 1982, p. 48. A description of the University of Wisconsin-Extension's narrowband television system.

"New Captioning Aid." *Access*, April 19, 1982, p. 1. A report on a new captioning service, "Real Time Captioning," that reads speech shortly after it's spoken.

Rhodes, Dale. **"Upscale, Downscale: PTV's Demographics."** *Current*, April 16, 1982, p. 6. A survey of demographics which disputes the popular notion that public television is elitist.

Slater, Carolyn. **"At Last the Avizandum Show."** *Journal of Educational Television*, Vol. 8 (1982), 37-45. A profile of a continuing education program for lawyers in Scotland using television.

Spears, Robert E. and Ted Baldwin. **"Making Good ITV for $30,000 a Year."** *E·ITV*, May 1982, pp. 110-114. An examination of cooperative production to develop video programs for science education at Louisiana State University.

Townsend, George. **"LPTV Transmitter Coverage Area."** *E·ITV*, April 1982, pp. 73-75. A comparison of low-power and high-powered broadcasting stations that demonstrates the commercial viability of the former.

Cable Television

"Whither the Institutional Loop?" by Chuck Moozakis, *TVC*, April 15, 1982, pp. 84-86.

Although the idea of linking local government buildings, schools, hospitals, and businesses through telecommunications is not new, it has only been within the past year or so that modern cable construction included the capacity for such loops. Residential cable service has usually been given priority over institutional uses. However, there is optimism that institutional networking will become an important source of revenue for cable operators.

To date, there are few institutional loops in operation. Manhattan Cable's data transmission link serving New York banks and government offices is among the oldest. This eight-year-old loop is a closed-circuit, point-to-point operation that transmits data among its client base, and is considering videoconferencing.

In contrast to the Manhattan Cable loop, those in other areas need to boost awareness and use by aggressive marketing. Warner Amex of Dallas and Mile Hi Cablevision of Denver are representative of new institutional loops where system officials are working with local research firms and community leaders to determine what the loop will do and at what cost. An important question is how much revenue a loop can generate. The Mile Hi plan calls for a "Best Net" (Business, Education, Shopping, and Transaction Network) that allows for data transmission, ski lift ticket purchase, etc.

Other operators trying to develop institutional loops include Arlington (Massachusetts) Cablesystems, which links 33 institutions; and the Vision Cable system in Clearwater, Florida, where about 12 institutions are connected, but where retaining community interest is a problem. These situations illustrate that once a loop has been established, institutions must be taught how to use it.

"As Subscribers Like it." *CableVision*, April 26, 1982, pp. 44-52. A study of cable programming and the services most desired by potential subscribers in major urban areas.

Bentz, Carl. **"Local Feature Programming Pays Off."** *Cable Engineering*, April 1982, pp. CE16-18. A profile of local origination programming in Overland Park, Kansas.

"Cable, 1982 and the New Realities." *Broadcasting*, May 3, 1982, pp. 56-62. An interview with the president of the National Cable Television Association, Thomas Wheeler.

"Cableshop Launches 10-Month Interactive Ad Experiment." *Broadcasting*, March 29, 1982, p. 124. A report on an interactive advertising experiment on cable television in Peabody, Massachusetts.

Delbel, Jeff. **"Using Local CATV Programs to Teach TV Production."** *E·ITV*, April 1982, pp. 31-34. A profile of a local origination station operated by TV production students at Cayuga Community College in New York.

"52 Communities in New Jersey Connected by UA-Columbia System." *Communications News*, April 1982, pp. 68-69. A description of one of the largest cable interconnects in the country.

"Franchising." *TVC*, May 1, 1982, pp. 41-60. A roundtable discussion between representatives of the cable industry and the municipalities.

Goldstone, Patricia. **"Accessing Public Access."** *Cablevision Plus*, April 26, 1982, pp. 14-17. A profile of public access in Los Angeles, California.

Gruber, Bill. **"How One System Serves Its Community."** *TVC*, May 1, 1982, pp. 156-158. An examination of the four areas of community programming by Cox Cable in San Diego, California.

Hack, Sylvia. **"Municipal Ownership Battle Raises Key Issues."** *CableAge*, March 8, 1982, pp. 6-10. A comparison of several publicly-owned cable systems and the issues surrounding municipal ownership.

Jacobs, Bruce. **"New Models for Cable Co-ops Hold Promise."** *Access*, March 15, 1982, pp. 1, 3. A discussion of the development of consumer cooperative ownership of cable systems.

Marks, Jill. **"How to Get in Step With Local Affairs."** *TVC*, April 1, 1982, pp. 30-50. A look at several cable systems involved in local access programming.

Moozakis, Chuck. **"San Antonio '82: 'Journey Into the Past'."** *TVC*, March 15, 1982, pp. 48-61. A review of the annual Texas Cable Television Association Convention.

Metz, Brad. **"Home Shopping Programming Reaching Competitive Peak."** *CableAge*, March 22, 1982, pp. 6-10. A review of the numerous shop-at-home programming services available by cable.

Neustadt, Richard M. **"Privacy and Cable: How Severe the Problem?"** *TVC*, May 1, 1982, pp. 146-148. An examination of privacy issues surrounding interactive cable services.

Ovnick, John et al. **"Future Trends in CATV Tecnology."** *Cable Engineering*, April 1982, pp. CE4-6. A discussion of technological advances that will improve CATV bandwidth capacity.

Pesin, Ella. **"Broadening Narrowcasting: Few Look to More Hours."** *CableAge*, May 3, 1982, pp. 74-76. A discussion of the few cable program services that plan to expand their hours of operation.

"Putting Social Trends to Use in Cable." *Broadcasting*, May 10, 1982, pp. 47, 50. A report on sociological factors and economic trends that have implications for the future of the cable industry.

Stoller, David. **"The War Between Cable and the Cities."** *Channels*, April/May 1982, pp. 34-37. An examination of the franchising battles between cable system operators and municipal governments.

"The Cable Connection." *Broadcasting*, May 3, 1982, pp. 37-54. A report on the state of the cable industry and the future services that may be offered.

"The 1982 Directory/Buyers' Guide." *Cable Communications*, March 1982, pp. 24, 71. A comprehensive listing of services for the cable, broadcasting, and telecommunications industries.

Tinsley, Elisa. **"Government Reservations: Franchise Pluses, Minuses."** *CableAge*, March 22, 1982, pp. 22-24. An examination of cable system operators serving the U.S. government—particularly military installations—the problems and the advantages.

Yovovich, B.G. **" 'Age of Cable' Dawning on Impatient World."** *Advertising Age*, April 26, 1982, M11-13. A review of the development of cable and predictions for its future.

Teletext/Videotext

Baker, Jeri. **"Out of the Time Incubator."** *CableVision Plus*, March 22, 1982, pp. 15-16, 18. A look at Time Inc.'s plans to enter electronic publishing with cable teletext.

Barnett, Anthony. **"The Future Battle to Win the Benefits of Teletext Service."** *Broadcasting*, March 29, 1982, p. 16. A commentary on the various experiments underway to test the market for teletext data and programming.

"BBC Demonstrates High Quality Pictures on Ceefax." *Broadcast Engineering*, May 1982, pp. 84-100. A discussion of the British Broadcasting Company's broadcast of still pictures via Britain's teletext system, Ceefax.

Burkitt, Alan. **"Britain: Five Years of Teletext Services."** *Satellite Communications*, May 1982, pp. 40-44. An overview of the British teletext system.

"Cable Teletext Service Will be Fed By Satellite." *Broadcasting*, March 15, 1982, p. 144. A report on a joint venture being planned to offer national teletext service in the U.S. via cable.

"Dallas Teletext Backers Bullish." *Broadcasting*, April 12, 1982, pp. 48-51. A report on a panel session on commercial stations' use of teletext services.

Evanow, Peter. **"QUBE to the Third Power."** *CableVision Plus*, May 3, 1982, pp. 15-22. An overview of the evolution of QUBE interactive television.

"Greek Bank Has Decided on French Teletel Videotext Technology for Service Including 4,500 Terminals." *Communications News*, April 1982, p. 13. A report on an international commercial bank offering videotext services on the French Teletel system.

Mapp, L.T. **"The Telesoftware and Education Project: A Progress Report."** *Journal of Educational Television*, Vol. 8 (1982), 25-29. A description of a British research project broadcasting computer programs via teletext.

Miller, Darby. **"What's Next in Videotext."** *Videography*, April 1982, pp. 47-50. A discussion of various videotext experiments and systems in operation that offer information services.

Rhodes, Bill and Carl Bentz. **"Teletext: A Broadcast Service in Transition."** *Broadcast Engineering*, May 1982, pp. 76-88. A review of recent activities, industry trends, and experiences in teletext/videotext.

"Seriouser and Seriouser about TV Text." *Broadcasting*, April 26, 1982, p. 34. A report on plans for a nationwide teletext service for consumers sponsored by Centel Corp., Honeywell Inc., and Field Enterprises.

Sullivan, Bill. **"CableText: Into Its Second Year Via Satellite."** *Satellite Communications*, May 1982, pp. 26-28. A profile of the first satellite-delivered teletext service, Southern Satellite Systems.

"Toronto Plugs Libraries Into Huge Videotext Utility." *American Libraries*, April 1982, p. 266. A discussion of an interactive, public access videotext project involving libraries in Toronto, Canada.

"Videotext Prognostications." *CableVision*, April 12, 1982, pp. 67-69. A report on communications companies providing videotext services.

Wheeler, Thomas. **"Move Into 'Telepublishing' Brings Unparalleled Information Vehicle."** *Communications News*, April 1982, p. 66. An address welcoming the development of teletext and videotext services delivered by cable and a discussion of the issue of ownership of these systems.

Wynne-Davis, Peter. **"World Communications Get the Videotext Picture."** *Broadcast Engineering*, May 1982, pp. 102-108. An overview of recent develop-

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Books, research papers, and occasional papers with information on how to obtain the publications.

Apple II Basic, available from Compuvid, a division of Development Communications Associates, Inc. [111 South Fairfax St., Alexandria, VA 22314; 703/683-3234]. 100 minutes. $90. A preview tape is available for $15.

A series of instructional video programs for beginning users of personal computers. This videotape introduces the Apple II computer and how to interface peripherals to the computer. It also includes a step-by-step introduction to Basic programming language.

Gavel to Gavel: A Guide to the Televised Proceedings of Congress, by Alan Green and Bill Hogan. Available from the Benton Foundation, [2010 Massachusetts Avenue NW, Washington, DC 20036]. 1982. Single copies are free.

A guide to what takes place on screen and behind the scenes, how bills become law, how the voting system functions, and how to decipher the jargon of legislative debate. A useful resource in educational settings where the televised proceedings are used as a teaching tool, this booklet is designed to improve viewers' understanding of the legislative process and to encourage active participation.

MediaLog: A Guide to Television, Film & Radio Programs, available from the National Endowment for the Humanities [806 15th Street NW, Washington, DC 20506]. 1982. 98 pp. Free.

A listing of over 315 film, television, and radio productions dealing with seven general areas of the humanities. This book describes each program with information on length, content, format, distributor, and costs.

Microcomputer Directory, Monroe C. Gutman Library, Harvard University Graduate School of Education [Appian Way, Cambridge, MA 02138]. 1982. 150 pp. $15, plus postage.

A description of projects using microcomputers for instructional and administrative purposes in elementary and secondary, schools, colleges, museums, and alternative learning sites throughout the U.S. Each entry includes information on program scope and grade level, type and number of computers, contact persons, funding source, and narrative description of project.

Microprocessors: Fundamentals & Applications, Association for Media-Based Continuing Education for Engineers, Inc. [Dept. 52, 225 North Avenue NW, Atlanta, GA 30332]. 20 color videocassettes sell for $8,900; rental for 20 weeks, $1,650. Preview package available for $99.

A complete self-study guide aimed at engineers, scientists, and technical personnel with basic knowledge of digital electronics. Covering elementary computer concepts through real-time applications, this course includes videocassettes, microcomputer, study guide

ments in videotext in the U.S. and Europe led by commercial interests.

Computers

"Here Come the Microkids," by Frederic Golden, *Time*, May 3, 1982, pp. 50-56.

Across the United States, elementary and secondary school students are being introduced to computers and computer programming. Many experts agree that the lure of the machines is the lure of control, or the pleasure of being able to think something and make it happen.

In many communities, parents are helping raise funds for more school computers. Computer literacy is thought to be so important that the Alfred P. Sloan Foundation is beginning a major program to get liberal arts colleges such as St. John's College in Maryland to begin giving courses in it. Many of the approximately 100,000 computers now in U.S. schools are in affluent suburbs, but they are also being found in small, rural schools. The spread of small computers has been called an "avalanche."

So far the most common use of classroom computers has been for drill and review. Some innovative approaches are also found, however, such as a program called Wrong Note, developed by the Minnesota Educational Computing Consortium to help teach sight reading of musical scores. Other important uses are as a remedial tool and as think-tank type strategy games.

It is anticipated that whatever these students make of their computer experiences—in the classroom and out—they will confront the world differently from their parents; it is possible that the logic required will sharpen the thought processes of the computer generation.

"The Microcomputer in Industry Training," by Nguyen Duc Quy and Jon Covington, *T.H.E. Journal*, March 1982, pp. 65-68.

Rapid technological advances in industrial and business equipment and processes require that employees be constantly retrained. Microcomputers are being used successfully for this purpose. Training can take three forms: (1) learning that provides basic skills to new employees, (2) continuing learning for existing employees needing to update skills and to acquire new knowledge, and (3) complex learning for decision-making in complicated situations.

Business responses to industry training are varied. Kodak's Customer Equipment Service Division uses an Apple II microcomputer for training its technicians. A helicopter logistics firm, Heliflight Systems, Inc., is using microcomputers for individualized pilot instruction. The transportability of the equipment and diskettes eliminates the need to transport students to different settings.

In sales occupations the microcomputer is particularly versatile. Eli Lilly-Elanco Division trains new field salespersons on products and selling techniques in the field; Tucson's Pima Community College, in conjunction with Mountain Bell, has developed a course to train telephone installers using the computer.

In addition, the American Heart Association in Dallas is using computer simulation to help in cardio-pulmonary resuscitation (CPR) training; and Babcock & Wilcox, which sells sophisticated equipment to utility companies, includes training for supervisors and employees on the operation of the equipment.

Although these applications indicate great potential for the use of personal computers in training, a major drawback could be found in the range of course design. As yet, there are few research-based conclusions on adult learning to aid in the development of teaching materials.

and lab manual, and programming manuals.

The Hopes and Fears of the Information Revolution (Communications and Society Report-in-Brief No. 82-1). Aspen Institute [717 Fifth Avenue, New York, NY 10022]. 1982. 8 pp. Free.

A summary of the fears and hopes for the effects of widespread use of computer-based information and communications technologies as expressed by participants in a communications policy workshop. This paper focuses on concerns of privacy and concentration of power, as well as improved literacy, diversity of programming, and strengthening of the economy.

The Interactive Cable TV Handbook, Rhonda Presser, editor. Phillips Publishing, Inc. [7315 Wisconsin Avenue, Suite 1200N, Bethesda, MD 20814]. 1982. 104 pp. $49.

A listing of cable systems, multiple system operators, providers of equipment and services, law firms, and government agencies concerned with the development of interactive cable systems. Also provided in this booklet is a discussion of the development of and future prospects for two-way cable.

The Coming Information Age: An Overview of Technology, Economics, and Politics, by Wilson Dizard. Longman Inc., College & Professional Book Division [19 W. 44th Street, New York, NY 10036]. 1982. 256 pp. $24.95.

An analysis of the technical, economic, and political factors involved in the shift from industrialism to the information age. This book includes a description of the new technologies that are changing the basic structure of society, an account of the role of industry in building communications networks, and a discussion of economic statistics compiled by the U.S. Department of Commerce.

The Powersharing Series, Martha Stuart Communications, Inc. [P.O. Box 246, Hillsdale, NY 12529]. Five videotapes. $1,000 purchase; $150 rental (one-day).

An introduction to microcomputers for prospective and new users. This series of five videotapes explains the various kinds of equipment and programs, access to computerized information banks, applications as a professional and personal tool, as well as the implications of micros for the future. Using the Apple II, the videotapes guide viewers through the steps involved in using the microcomputer and various programs.

Behrens, Steve. **"Downloading: Future Audiences May Receive Programs on Apples."** *Current*, March 31, 1982, pp. 1, 6. A view of public broadcasters' transmittal of educational programs to institutions for use on microcomputers.

Bingham, Margaret. **"Providing Assistance for the Implementation of Educational Microcomputers—A Statewide Approach."** *T.H.E. Journal*, May 1982, pp. 101-105. A review of two efforts to establish statewide programs in North Carolina to assist educators in the use of microcomputers for instruction.

Boynton, G. R. **"Computing in Universities: Setting Up a Computerized Department."** *EDUCOM Bulletin*, Spring 1982, pp. 22-24. An overview of the computerization of the Department of Political Science at Iowa State University.

"Data General Gives WPI $300,000 Computer." *WPI Newsbriefs*, March 1982, p. 1. A report on a donation to Worcester Polytechnic Institute of a Data General Corporation computer for teaching purposes.

Ditlea, Steve. **"Anatomy of a Personal Computer."** *Technology Illustrated*, April/May 1982, pp. 59-64. A description of the internal components of the Apple II personal computer.

Hagerman, William L. **"ITV and CAI—What Each Can Do for You."** *E·ITV*, May 1982, pp. 96-98, 100. A comparison of video instruction with computer-based instruction and the advantages of combining technologies to eliminate the disadvantages of both.

Heller, Marvin. **"Computer Literacy: Speaking for the Illiterates."** *T.H.E. Journal*, May 1982, p. 89. A commentary on the information required by an "illiterate" in a computer literacy program.

Jacobson, Marilyn D. and Barbara T. Gra-

bowski. **"Computerized Systems of Career Information and Guidance: A State-of-the-Art."** *Journal of Educational Technology Systems*, Vol. 10 (1981-82), 235-255. An analysis of computer-based systems for career guidance information.

Pole, Joyce. **"Electronic Learning: The Ubiquitous Computer."** *Alcalde*, May/June 1982, pp. 10-15. A profile on the use of computers at the University of Texas.

Richards, Susan C. **"Who's Getting On-Line?"** *Advertising Age*, May 10, 1982, p. M-23. A discussion of computerized databases and the prospects for their use in business publishing.

Trollip, Stanley R. and William B. Johnson. **"Computer Applications in an Aviation Training Environment."** *Journal of Educational Technology Systems*, Vol. 10 (1981-82), 223-232. An examination of the Institute of Aviation at the University of Illinois at Urbana-Champaign and its use of computer-based instruction integrated into traditional curricula.

"Vassar College Taps EDUNET for Computer Literacy Program." *EDUNET News*, Spring 1982, p. 4. A report on a computer literacy program at Vassar College using the EDUNET network.

Wager, Walter. **"Design Considerations for Instructional Computing Programs."** *Journal of Educational Technology Systems*, Vol. 10 (1981-82), 261-270. A review of different types of computer-assisted instructional programs that provide different levels of instruction to the learners.

"Xerox Gift Transforms 'Print to Speech' for the Blind." *EDUCOM Bulletin*, Spring 1982, pp. 19-21. A discussion of the contribution by IBM of 100 Kurweil reading machines to colleges and universities for use by visually handicapped learners.

Radio

Behrens, Steve. **"Digital: 'The Quality Really Spoils a Person'."** *Current*, April 16, 1982, p. 3. A report on a new radio technology that improves the quality of sound recordings.

"Cable Offers New Opportunities for Radio Stations." *Broadcasting*, April 12, 1982, pp. 74-75. A review of a session at the NAB convention on the potential of cable radio.

"Public Radio's Capitol City Roundup." *Broadcasting*, April 26, 1982, pp. 66-67. A discussion of the Public Radio Conference in Washington, which focused on financial independence of National Public Radio.

Satellites

"Stanley Hubbard and His Magnificent New Flying Video Machine," by Julie Talen, *Channels*, April/May 1982, pp. 44-58.

Stanley E. Hubbard, who runs KSTP-TV in the Twin Cities, Minnesota—the last of the family-held, family-run stations—has added to his holdings the United States Satellite Broadcasting Company, Inc. (USSB). It is the Hubbard family's response to a perceived threat: the direct broadcast satellite (DBS).

The Hubbard plan calls for the formation of a confederation of local stations, building a system of indirect broadcast satellites, programming the system, and beaming channels directly to anyone with a dish to receive the signals. The system would have two large satellites, each with two beams ("footprints") that would in turn carry three television channels covering one U.S. time zone. An application for such a plan has been filed with the FCC.

One of Hubbard's three channels would carry general audience entertainment such as that carried by the networks now, another would carry 24-hour news. The third channel would be left open for future development.

In each USSB market, one independent station would get exclusive rights to rebroadcast Hubbard's material. Local news and local advertising would be encouraged. As an inducement to join, Hubbard plans to offer stations first option at a public stock offering of nonvoting shares, and they will also elect a board to oversee operation of the system.

The application for the Hubbard DBS service promises to be a boon for the local broadcaster, and includes use of every existing non-network television outlet available such as low-power television, cable systems, etc.

Degnan, Kim and Paul I. Bortz. **"The 'Hidden Costs' of DBS."** *Satellite Communications*, April 1982, pp. 42-43. An analysis of the business aspects of DBS based on the proposals of the eight current applications before the FCC.

"Disagreement Over DBS." *Broadcasting*, April 12, 1982, p. 102. A review of a panel discussion on DBS and its impact on conventional broadcasting.

"Get Ready for DBS." *Broadcasting*, March 22, 1982, pp. 55-56. An announcement of the FCC's readiness to authorize DBS service.

"Guide to Satellite Earth Stations." *Videography*, April 1982, pp. 57-61. A survey of companies offering satellite earth station hardware.

Morgan, Walter L. **"Initial European DBS Satellites."** *Satellite Communications*, April 1982, p. 56. An examination of policy issues involving European broadcasting satellites.

Sharman, Howard. **"Direct Broadcast Satellite Makes Waves in U.K."** *Advertising Age*, March 22, 1982. An announcement that the British government has authorized DBS to start by 1986. Taylor, John P. **"Shifting Transponder Lineup a Game of Musical Chairs."** *CableAge*, May 3, 1982, pp. 48-54. A discussion of the increasing need for transponder space by satellite-delivered cable programs and the new satellites planned to handle the demand.

"The Satellite Crunch." *Cable Communications*, March 1982, pp. 19-20. A report on two studies that indicate the increased need for satellite capacity and, the development of satellite/cable networks that will provide more segmented programming in the future.

Williams, David. **"Special Report: DBS, Point-to-Point Satellite Surface at AAIA Conference."** *Cablenews*, March 24, 1982, p. 7. A report on competition between satellite manufacturers to build direct broadcast satellites.

Teleconferencing

"How to Integrate New Meeting Technology," by Tim Kelly. *Successful Meetings*, March 1982, pp. 51-57.

Technological advances and rapidly increasing costs are causing industry to look at innovative ways to provide meeting functions. Video teleconferencing and cable offer two alternatives.

This article reviews teleconferencing from previously unexplored perspectives, providing case histories of two successful telemeetings (including problems that occurred), and noting the booming field of electronic meeting consulting as well as some of the other technological advances that will affect the future.

One case history is the monthly videoconferences of ALI-ABA, the American Law Institute and the American Bar Association's joint committee on professional education. The eight-hour videoconference was produced by WHYY Inc., the public broadcasting station in Philadelphia, and was transmitted across the nation by the Public Service Satellite Consortium. Transmission and registration problems must still be resolved.

The second case history is that of Merrill Lynch, which has produced an innovative investment seminar on the implications of the Economic Recovery Act of 1981 via leased time on the Westar III satellite. The seminar was beamed to

convention halls and hotels in 30 cities, and on certain cable TV channels in major markets. In addition, Merrill Lynch has been producing in-house informational tapes for training and sales purposes for years, along with videoconferences for employee benefit presentations and annual meetings. A public videoconference on the new tax law, handled by Videonet (a California-based videoconference producer) was also conducted.

Issues to be considered in planning a videoconference include identification of goals, script development and review, participant readiness and evaluation, and costs.

"PBS Station Hooks into Videoconferencing," by Gwenn Kelly, *Videography*, April 1982, pp. 53-55.

In the face of severe budget cuts for the Public Broadcasting Service, one affiliate, WETA (Washington, D.C.), has set up a for-profit subsidiary, Wetacom, Inc. Wetacom is developing videoconferencing management expertise to maximize its resources, and its location with access to the PBS satellite system.

The advantage of the Washington location is the fact that the nation's capital is headquarters for more than 2,300 trade associations and labor unions whose members across the country want to be kept up to date on Washington events. With restricted travel budgets, videoconferencing—such as that already done by WETA for "The MacNeil/Lehrer Report"—is even more attractive.

Wetacom is working with trade associations to develop videoconferences that will deliver timely topical information to their members. These three-hour programs allow for questions from the participants and are used by federal agencies as educational seminars.

Public television stations are used as videoconferencing sites and can help prepare the participants. It is estimated that 375 to 500 videoconferences will occur annually by 1985, compared with about 50 in 1981. Public television's entry into the videoconference business could generate as much as $5 million in revenues annually.

Cross, Thomas B. **"Computer Teleconferencing—Being There Without Going There."** *Telecommunications*, May 1982, pp. 73-76. A description of computer teleconferencing, its applications, advantages, and costs.

"First Annual Videoconferencing Survey." *Videography*, April 1982, pp. 39-44. A comprehensive listing of companies offering services and hardware geared toward videoconferencing.

Gold, Elliot. **"Aetna's Permanent Network Bridges Eight-Mile Gap."** *Meeting News*, April 1982, pp. 18-19. A profile of the Aetna Life and Casualty teleconferencing network.

Hunter, Karen. **"A Cautious Welcome for Hotel Teleconferencing."** *Video Systems*, April 1982, pp. 29-33. A report on the involvement of hotels in offering teleconferencing services.

Keiper, Robert. **"Teleconferencing Executives Beam In On Future."** *Association Management*, March 1982, pp. 47-51. A discussion of the teleconferencing experiences of association executives.

Meagher, Christine. **"Regulatory Trends in Satellite Communications Offer Users Flexible Communications Services."** *Communication News*, April 1982, pp. 100-101. An overview of regulatory policies to be considered by companies implementing their own satellite systems.

"Nuts and Bolts Look at Teleconferencing Via Satellite for Corporate Applications." *Communications News*, May 1982, pp. 120-121. A review of an International Television Association panel on how to establish satellite networks for teleconferencing.

Paulsen, Greg. **"The View from VideoNet."** *Video Systems*, April 1982, pp. 15-21. A profile of a leading teleconferencing company with a basic explanation of the development of the technology from audio to video systems.

Thomas, Willard and Cinda Thomas. **"New Communication Technologies: A Teleconference."** *E·ITV*, April 1982, pp. 60-64. A profile of an International Association of Business Communicators teleconference on new telecommunications technologies.

"Use Audio Only or Full-Motion Video for Teleconferences? It All Depends." *Communications News*, May 1982, pp. 40-41. An examination of two forms of teleconferencing, audio and video, and how they are used to meet different objectives.

Wold, Robert. **"Satellite Technology: An Overview of the Newest Trend in Business Meetings."** *Video Systems*, April 1982, pp. 23-25. An overview of the trend in videoconferencing for business meetings.

Telephone

Vento, Charles J. **"The 'Red Phone' Distribution System."** *E·ITV*, April 1982, pp. 70-72. A description of a telephone system used by faculty at California State University-Sacramento to request instructional video programming.

Copy Delivery Systems

"The Videodisc in Higher Education: A Technological Resource," by Joan N. Sustik, *EDUCOM Bulletin*, Spring 1982, pp. 5-7, 18.

The videodisc is a mass storage medium, approximately the size of an LP record, that contains both audio and video information and can be displayed through an ordinary television receiver. It combines the best of computer and television technology, and is available in a variety of uses in home, business, and educational environments. The extent to which it will affect the process of education will be influenced by technical, economic, and organizational factors.

Noncontact or "optical" discs offer the greatest potential for educational instruction. The optical videodisc is played on a videodisc player, using laser-optical technology to convert information into pictures, music, voice, or logic.

Several university-based videodisc projects now underway include the following: (1) A University of Nebraska project uses interactive computer driven programs with a Radio Shack TRS-80 microcomputer to produce discs. Many are captioned for hearing-impaired students, and deal with a variety of topics ranging from decision-making to literature. (2) The University of Utah uses a TERAK microcomputer for physics instruction. (3) Utah State has special education programs employing a touch screen. (4) At the University of California-Santa Cruz an interactive system has been used to study the psychology of spatial learning. (5) The University of Iowa has developed applications across several content areas, including retrieval systems in art history and urology, patient education, and interactive stimulus for visual memory research in psychology.

Although there are problems, including technical difficulties, costs, and incompatible hardware, the future is promising. Light pens, touch panels, and other forms allowing the user to respond directly and accurately to the video image are being improved, and videoprinters can provide a print copy of the video image. In addition, efforts are underway to develop authoring systems to allow non-programmers to write programs.

"Video-tape Courses—Open/Distance Learning: Information Technology Here and Now," by K. D. Stephen, *Journal of Educational Television*, Vol. 8 (1982), 55-64.

The time-scale, magnitude, and attractive features of videotaped courses in the United Kingdom and United States are described in this article by a director of television at Heriot-Watt University in Edinburgh, who also assesses the future for this form of distance learning.

Stephen notes that televised, post-graduate-level, engineering courses have been available in the United States for well over a decade to increase the national effectiveness of the engineering workforce. The trend has been to make more courses readily available and to improve their quality.

In comparison, the U.K. is still in its "infancy," due partly to relatively higher broadcasting standards, lower emphasis on research and publication, smaller class sizes, and complex assessment trials and procedures. However, a 1980 House of Commons report suggests that continuing education is "a growth in which government coordination is crucial."

Videotape courses have many attractive features that appeal to both consumers (e.g., convenience, low direct and indirect costs, relevance) and academics (e.g., low financial risk, improved quality, variety). They will be especially significant as universities make courses more relevant to employer needs, giving them a competitive edge.

"Home Taping Controversy Goes Hollywood." *Broadcasting,* April 19, 1982, pp. 28-30. A review of comments by entertainment industry representatives in Hollywood regarding the home video recording controversy.

"Interactive Videodisc." *Videodisc News,* April 1982, p. 10. An overview of the development and use of videodiscs by several large American companies.

Nugent, Ron and Ken Christie. **"Using Videodisc Technology."** *Video Systems,* March 1982, pp. 16-21. A look at the Nebraska Videodisc Design/Production Group, established to explore the technology's potential and serve as a production agency for videodisc programming.

Rossi, Tom. **"The Sears Experiment."** *Video Systems,* March 1982, pp. 28-31. A description of the Sears Roebuck Company's interactive videodisc catalog.

Danna, Sammy R. **"Getting the Most Medical Video from a Basic Facility."** *E·ITV,* March 1982, pp. 66-71. A profile of the Chicago College of Osteopathic Medicine, which offers video production facilities for the medical education of students, patients, and physicians.

"ITVA Holds Record 14th Conference in Dallas." *Communications News,* May 1982, p. 118. A report of the International Television Association Conference on the growth of corporate video communications through the new technologies.

Liebman, Roy. **"The Coming of Media: The Cal State Experience.** *T.H.E. Journal,* May 1982, pp. 86-88. A discussion of the use of videotapes at California State University-Los Angeles library to familiarize students with library procedures.

"Selected Takes on Videodisc." *Video Systems,* March 1982, pp. 22-25. A look at several companies' involvement in the development of videodisc technology.

Thomas, Willard and Cinda Thomas. **"Organization Video About to 'Walk' on the Legs of Interactive Systems."** *Communications News,* April 1982, pp. 76-77. A discussion of the impact of interactive systems on video for organizational communication and training.

Troeltzsch, Lloyd. **"Why a Recordable Videodisc?"** *Video Systems,* March 1982, pp. 32-35. A discussion of the 3M Optical Recording Project and its commitment to recordable videodiscs despite dismal forecasts for the technology.

MACROSCAN

Programs, projects, conferences, workshops, other events, and funding sources.

National Online Meeting Held

The third annual meeting of users of online retrieval from databases was held March 30 through April 1, 1982 in New York City. The conference featured papers and discussions from experts in the field, exhibits of online products, systems, and services, and a series of workshops for user groups.

Catering to the different levels of development and need for information, the meeting was attended by information managers, educators and researchers, publishers, business executives, as well as producers and providers of online services. Proceedings are available for $50 from Learned Information, Inc., 145 Old Marlton Pike, Medford, NJ 08055.

Study Underway on Interactive Cable

The University of Nebraska-Lincoln's public broadcasting station, KUON-TV, and the university's Division of Continuing Studies have received joint funding of $100,000 for a research project to develop the educational potential of interactive cable television. The Corporation for Public Broadcasting is providing $50,000, while Cox Cable Communications, Inc. (Atlanta, Ga.) is contributing equipment, computer programming, and grant support valued at $50,000 for this year-long demonstration project that began March 1, 1982.

Interactive cable TV allows viewers to use a keypad to respond to televis material or to request textual information on the television screen. A computer in the cable operator's system tallies responses and responds to viewers' requests. The cable technology involved in Cox's INDAX (interactive data exchange) makes possible such services as information retrieval, banking, shopping, public opinion polling and education. Programming being developed in most of these areas has not yet focused on instructional materials.

Project participants will design, produce, and field test a series of interactive courses of instruction, possibly in the areas of personnel administration, business finance, and other business related areas. The courses will be developed by teams consisting of a content consultant from the University of Nebraska-Lincoln faculty, an independent study specialist/instructional designer from the Division of Continuing Studies, a Nebraska ETV Network graphics design specialist, and a computer programmer/team manager.

For more details, contact Lee Rockwell, asistant manager of educational telecommunications for the Nebraska ETV Network, P.O. Box 83111, Lincoln, NE 68501; 402/472-3611.

Penn State/Britannica To Cooperate

The Pennsylvania State University and Encyclopaedia Britannica Education Corporation plan to jointly produce, develop, and distribute educational television and film programs along with related print materials. According to the five-year agreement, the two will share information on research and development; provide for consultation between producers and faculty of appropriate academic disciplines during the planning of projects; and produce and distribute materials for schools and colleges as well as on-site education at government agencies, hospitals, and other institutions. Programs developed in the cooperative

venture will be distributed through public broadcasting, cable television, and satellite.

For more information, contact Marlowe Froke, director of media learning resources, 212 Keller Building, Pennsylvania State University, University Park, PA 16802; 814/865-6535.

Foundation Grants Computer Hardware

The Apple Education Foundation has awarded over $600,000 in microcomputer hardware and accessories to more than 150 recipients for the development of innovative, computer-based instructional projects. With its primary goal of improving the results of the educational process, the Foundation has supported and developed new methods of teaching and learning through low-cost technology. Grant authorizations have included an array of instructional disciplines—K-12 through post-graduate study, museums, libraries, health services, and special education.

For information on grant applications and deadlines, write Apple Education Foundation, 20525 Mariani Avenue, Cupertino, CA 95014.

Cooperation Theme of Technology Conference

Mutual benefits from close working relationships between academic institutions and business firms was the emphasis of a national conference held in Boston, March 15-17, 1982.

Case histories and demonstrations of the experiences of business and academic use of telecommunications (computers, in particular), as well as models for bridge-building between the two groups, addressed the potential of new technologies to meet future education and training needs. Panels indicated that such close relationships were far from prevalent.

The meeting was sponsored by Emerson College, American Society for Training and Development, and GTE Laboratories Inc., in cooperation with other education organizations, institutions, private groups, and professional associations. Clothbound proceedings of the conference can be obtained for $25. Write to Information Dynamics, Inc., 111 Claybrook Drive, Silver Spring, MD 20902.

TVOntario Creates Adult Learning Services Branch

TVOntario (TVO) has created a programming unit to serve the needs of Ontario's adult learners. This new focus is in response to external changes in society that indicate there is a growing demand among adults for part-time learning. The mandate of the Adult Learning Service is to develop and deliver highly structured learning opportunities based on television programs. These "learning systems" have a series of television programs as the core component, and include books, study guides, questionnaires, personalized computer responses, study groups and local contact with experts.

TVO is cooperating with colleges and universities in this effort to offer "formal" telecourse ventures, and with various agencies, volunteer groups, libraries, and government departments to offer general-interest learning experiences.

The Adult Learning Services Branch is currently developing a computer literacy project that will convey to teachers and parents the nature, operation, function, and application of microcomputers in the school environment. This learning system will consist of a 12-part television series, various reading materials, a computer-managed correspondence system, a hands-on manual (including software), and a network of local experts to help solve problems. The project is scheduled to begin in February, 1983 with over 7,500 registrations anticipated.

For additional details on TVO's Adult Learning Services Branch and its projects, contact Paul Avon, utilization officer, TVOntario, Box 200, Station Q, Toronto, Ontario M4T 2T1; 416/484-2665.

Engineering Courses Delivered By Microwave

A microwave system that will relay classes between the University of Idaho and Washington State University began operation this spring. The picture and sound relay will enable engineering students on both campuses to attend classes simultaneously. The system will also help the engineering colleges at both universities to deal more effectively with faculty shortages and rising student enrollments.

Courses to be relayed between the two campuses this spring include topics in chemical, civil, mechanical, and electrical engineering. Students on each campus will be able to ask questions of professors in the classroom at the other campus with the hook-up.

For more details, contact Tony Rigas, director, Engineering Education Outreach Division, University of Idaho, Moskow, ID 83843; 208/885-6291.

Regional Conferences Participate in CAEL Teleconference

"New Connections for Learning in the 80's," a national teleconference co-sponsored by Ohio University and the Council for the Advancement of Experiential Learning (CAEL), addressed major trends posing a challenge to higher education and to others involved with society's learning systems. The program featured videotapes, films, and interviews with panelists.

Participants in the teleconference were attending CAEL regional conferences at 11 sites across the country. The first half of the program allowed for discussion and other program activities at local sites. The second half focused on panelists' responses to questions and concerns posed by local participants through an audio hook-up. The teleconference supplemented a full day of program activities at each location.

The theme of this teleconference will also be the topic for the CAEL National Assembly scheduled for November, 1982. Tapes of the teleconference are available for both lease and purchase. For information, contact Diana Bamford-Rees, CAEL, 300 Lakefront North, Columbia, MD 21044; 301/997-3535.

National University Consortium Re-funded

The Carnegie Corporation of New York has awarded a two-year renewal grant of $737,250 to the National University Consortium for Telecommunications in Teaching (NUC). The University of Maryland University College and the Maryland Center for Public Broadcasting will continue to make contributions to the Consortium.

Through its members, this nonprofit association of universities, public television, and cable systems offers bachelor's degree programs for Americans who cannot, or choose not to, attend classes on campus. The NUC develops its own courses, adapts British Open University courses, and sometimes adopts traditional telecourses.

The Consortium does not grant degrees or award credit. Students receive their degrees from a local member institution. Each school adapts NUC course material in its own way, adopts an NUC course as its own, and determines credit value and tuition fees. Each cooperating television station broadcasts a series of eight or nine half-hour programs for each course adopted locally. Adults enrolling in courses offered by participating colleges receive instruction through print materials, TV broadcasts, and optional tutoring. Students can work toward degrees in Behavioral and Social Science, Technology and Management, and Humanities.

For information on membership and courses, contact Allan Hershfield, executive director, NUC, Adelphi & University Blvd., Room 340, Adult Education Center, College Park, MD 20742.

Periodicals

The following periodicals were reviewed for this issue of *TELESCAN* but do not appear in our original list of publications (Sept./Oct. issue):

Alcalde
University of Texas-Austin

Association Management
American Society of Association Executives

EDUCOM Bulletin
EDUCOM

EDUNET News
EDUCOM

Meeting News
Gralla Publications

Successful Meetings
Bill Communications, Inc.

WPI Newsbriefs
Worcester Polytechnic Institute

Contributors

Contributors to this issue of TELESCAN are listed below. The efforts of these individuals have been critical to our monitoring activities. ***We urge those of you who wish to become part of this important information network to submit to TELESCAN items of potential interest to our broadly based audience.***

Paul Avon
TVOntario

Susan Fratkin
National Association of State Universities and Land-Grant Colleges

Jinny Goldstein
Public Broadcasting Service

Karen Heald
Benton Foundation

Linda Resnik
Applachian Community Services Network

Errata

The last issue of *TELESCAN* (May/June 1982) incorrectly quoted the price of the 1982 Teleconferencing Directory on page 9. The correct price is $75. We are sorry for any inconvenience this error may have caused.

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FOR HIGHER EDUCATION
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INDEX TO TELESCAN, VOLUME 1

TELESCAN is a valuable reference source for administrators, program developers, researchers, and business managers involved in using, or interested in the applications of telecommunications for adult education and training. This index provides comprehensive, immediate access to the nearly 1,000 items contained in back issues of *TELESCAN*. All entries are arranged by alphabet. Each entry is followed by an issue number and page number listed in chronological sequence.

This index marks the completion of Volume 1, Issues 1-6 of *TELESCAN* covering the period from September 1981 through August 1982. Individual indexes may be purchased for $7.50 each. Back issues of *TELESCAN* may be purchased by the volume (six issues) for $30. This price includes a copy of the index.

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